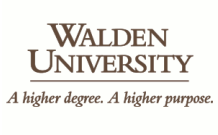

2020

College Student Performance in Blended, Accelerated and Traditional Developmental Reading Instruction

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This is to certify that the doctoral study by

Rochella D. Bickford

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Abstract

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Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Despite evidence that underprepared college students benefit from literacy support, students who take developmental courses are less likely to earn a degree or certificate. Many community colleges have implemented redesigned developmental coursework models to improve student success, but there is a gap in practice on redesigns that involve an accelerated, blended model of instruction. This quantitative, causal-comparative study using archival data was based on Knowles' theory of adult learning that postulates adults exhibit self-awareness, internal motivation, and independent initiatives in learning. The purpose was to compare students who took a blended, accelerated developmental reading course and students who took a traditional developmental reading course. The research questions addressed differences in successful course completion rates and reading growth using archived data from 443 students. Course completion rates and reading growth were compared using a *t* test for independent samples and a chi-square analysis. Results showed statistically significantly higher course completion rates and comparable reading growth for students in blended, accelerated developmental reading courses compared to students in traditional courses. Tests of effect size presented weak associations between course format and course completion rates and between course format and reading growth. The results provided the foundation for a curriculum plan comprising a blended, accelerated model of developmental reading instruction to promote positive social change by allowing adult learners to increase literacy skills and complete developmental reading courses in a shorter amount of time, contributing to increases in retention.

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Dedication

My education, including this study, is dedicated to my family and my students – all of whom have led me on a never-ending educational journey to grow and share my passion for reading and learning. My great-grandparents and grandmother were the first to show me what a collection of books looked like; my great-grandmother's Bible is the first example of annotation I can remember. My parents taught me literacy starts at home. Recipes, trips to the library, personalized books, encyclopedias, free pizzas, and even printed lyrics on album sleeves were all a part of how I learned to read and love to read. Thank you to my parents, Dale and Ginger Johnson, my Grandma Edna Johnson, my Aunt JoDell, and other family members who raised me, read to me, encouraged me, pushed me, and carried me; I love you all.

One day, my grandpa Hobart Stanley said to me, "Never quit school. No matter what you do, don't quit." In turn, I dedicate this work to my children, Cierra and Caleb, and my grandson, Caelan. I hope you all and your children also never quit on your dreams and goals. I love each of you, and I am thankful you were in my life during this process.

I also dedicate this work to my husband, Kelly. No one else in this universe has the patience you must have to be my partner, best friend, confidant, and grounding force. Together, we have a home filled with a lot of love and tolerance. I love you and our life.

Last, but far from least, I dedicate my life's purpose and this work to my students. You all have inspired me, challenged me, caused me angst and heartache, and have shown me what it feels like to have intention present in my work. Thank you, all.

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I would like to thank my committee chair, Dr. Barbara Schirmer, for making sure I successfully completed this capstone. There were many times when I doubted myself, the process – everything! Dr. Schirmer, your clear and concise feedback and level-headed, targeted focus proved to be integral to my success. Thank you for being the mentor I needed. Thank you to Dr. Jann James and Dr. Gelu Ionas for your work in reviewing my capstone. Dr. James, I appreciated your timely, personalized comments. Dr. Ionas, I cannot thank you enough for reviewing my methodology and statistics sections. Your work was essential to my accuracy!

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I would also like to thank several teachers of my own, who (whether they know it, or not) are responsible for my addiction to literacy, learning and teaching: Mrs. Gloria Henry, Mrs. Peggy Epstein, Mrs. Karla Thompson, Mrs. Jean Gelsinger, Dr. Warren Wheelock, Dr. John George, Dr. Maxine Moore, Dr. Jane Greer, Dr. Hadara Bar-Nadav, Dr. Virginia Blanton, Dr. John Barton, and Dr. Daniel Mahala. A fascinating facet to teaching is that you never know the breadth of your reach. Thank you all for your teaching. Truly.

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Section 1: The Problem

The Local Problem

The problem underlying this study is the high attrition rate for students required to complete developmental reading coursework in community colleges (Valentine, Konstantopoulos, & Goldrick-Rab, 2017). Due to lengthy developmental coursework sequences, over half of the students in remedial classes leave postsecondary institutions before advancing to credit-bearing, degree-applicable classes (Bailey, Bashford, Boatman, Squires, & Weiss, 2016). Based on analysis of data from the United States Department of Education's Beginning Postsecondary Student Survey, Barry and Dannenberg (2016) found that students required to take developmental education courses during their first year of college were 3 times more likely to drop out of college than peers who did not take developmental courses.

Most community colleges provide developmental coursework to support students who are underprepared in math, English, and reading skills (Goldwasser, Martin, & Harris, 2017). Only a third of students who take one or more developmental courses when they first enrolled at a community college completed a degree or certificate within 6 years of matriculation (Ganga, Mazzariello, & Edgecombe, 2018). National organizations such as the College Reading and Learning Association (2018) and the Center for Community College Student Engagement (2016) support research in course redesign options, such as accelerating or compressing course sequences and integrating developmental reading and writing into a single course.

To address this problem, a growing number of community colleges, including the college studied, have attempted developmental coursework redesign models, but there is a gap in practice on the benefits of redesigns that involve an accelerated, blended model of developmental reading instruction on reading achievement and college persistence (Natow, Reddy, & Grant, 2017; Vick, 2015). At the local community college, a blended, accelerated model of developmental reading was implemented in 2016. Instead of spending an entire year to complete the two-course reading sequence, students can take 8-week courses and complete the required foundational work in one semester.

According to the dean of enrollment management, 60% of all first-time, incoming students were required to enroll in developmental coursework in the fall of 2017, making developmental reading one of the most frequently taken courses on campus. The local community college began implementing accelerated, blended developmental reading courses in the fall of 2016 to increase the passing rate in developmental courses. The accelerated, blended model of developmental reading at the local community college allows students to take both courses in the developmental sequence in one semester, as opposed to multiple semesters, and students engage in independent work outside of class using course computer software. According to the division dean, no evaluation of the redesigned courses had been conducted prior to the present study to compare successful course completion rates or reading growth improvement rates to traditional developmental reading courses that are taught with face-to-face instruction for semester-long sessions.

As developmental courses are intended to provide students with the knowledge and skills to be successful in the regular college curriculum, there is a gap in knowledge of whether students who need to fulfill development coursework requirements demonstrate better course completion rates and more significant reading skills development with an accelerated, blended learning model of developmental reading instruction using technology and reduced face-to-face class time compared to a traditional, on-ground model of course instruction.

Rationale

Based on data collected from the National Center for Educational Statistics (NCES, 2016), students who complete remedial college coursework have better educational outcomes in college matriculation, rate of course completion, and persistence to graduation than students who need remediation but do not enroll in this coursework. However, students who enroll in remedial college coursework frequently experience greater student loan debt because of the extended time involved and the reduced likelihood of degree completion when multiple developmental courses are taken (Valentine et al., 2017).

In response to the problem of improving student graduation rates, some states have elected to exclude developmental education entirely (Boylan, Brown, & Anthony, 2016). However, eliminating developmental courses may result in decreased college graduation rates for students who need remedial assistance to be successful in regular college coursework (Borland et al., 2015). The local community college has continued to offer developmental courses in traditional, face-to-face, semester-long sections and added

accelerated, blended sections of developmental reading in 2016. The local community college has a substantial population of nontraditional students who are over the age of 25 years old, work full-time, and have children living at home. According to the advising office, many of these students prefer accelerated, blended sections of developmental reading due to family and work-related commitments.

According to student course grade data available from the local community college's internal web portal, 65% of students in the traditional, face-to-face developmental reading courses earned a passing grade of C or better in developmental reading courses between 2014 and 2017. Concern about this course success rate has been discussed as a gap in practice in developmental reading course instruction at the local community college by both department faculty members and administrators. Furthermore, it is a goal in the college's strategic plan published on the internal web portal that faculty and curriculum coordinators should determine the reasons for student course failure and identify instructional changes to improve retention. Therefore, the purpose of this quantitative, causal-comparative study was to compare the reading achievement and course passage rates of college students who take an accelerated, blended model of developmental reading instruction to peers who take a traditional developmental reading course.

Definition of Terms

Accelerated developmental course: Coursework that is completed in a shorter amount of time, frequently accomplished by compressing multiple courses of a sequence into a single semester (Edgecombe, 2011; Hodara & Jaggars, 2014).

Andragogy: Adult learning theory based on six principles: (a) desire to learn, (b) self-concept, (c) life experience, (d) intrinsic motivation, (e) need to know, and (f) orientation to learning (Knowles, 1970, 1984; Knowles, Holton, & Swanson, 2005).

Blended learning: Coursework that combines face-to-face and online instruction (Picciano, 2017).

Developmental reading course: Coursework that develops students' existing reading skills and background knowledge to enable access to and comprehend college-level texts and reading materials (Arendale, 2007).

Successful course completion: An earned grade designated as proficient for the course, as defined by the institution (U.S. Department of Education, 2018). The institution in this study defines "passing" and successfully completing a course as earning a grade of C or better.

Traditional developmental course: Coursework that involves face-to-face interactions between the instructor and students (Nafukho & Irby, 2015).

Significance of the Study

This study addressed a gap in practice related to using a specific course redesign model (i.e., blended, accelerated learning) with college students taking developmental reading at the local community college to determine if students in the redesigned course attain better successful course completion rates and reading level growth than students who take the traditional developmental reading course. While various course redesign efforts have taken place on a national scale, there is a lack of research on the benefits of redesigned courses compared to traditional courses (Goldwasser et al., 2017).

Seventy-four percent of all undergraduate students are classified as nontraditional (NCES, 2016), and open-access community colleges regularly accept a substantial proportion of nontraditional students with numerous personal and professional responsibilities outside of college academic work (Griffin, 2019). Recently, researchers have reported that nontraditional students are more likely to experience greater success and retention in online coursework than their younger, traditionally aged peers (Gregory & Lampley, 2016).

The results from this study have the potential to improve learning outcomes and generate positive social change at both the local level and within the broader community of adult literacy educators and researchers. At the local site, the results from this study can guide faculty and administrators responsible for developmental course design to determine if the accelerated, blended design yields better learner outcomes than the traditional developmental reading courses. Additionally, data from this study can inform ongoing efforts to support students who need academic literacy support at the onset of their college education, resulting in greater persistence and increased college completion rates. Data from this study may also assist other colleges with designing developmental reading programs that can be completed in less time and more successfully than traditional methods of developmental coursework. By studying alternative, more flexible opportunities to complete prerequisite college coursework, students who have been traditionally underserved may be able to access and complete developmental coursework without enduring time-consuming and costly methods of traditional remediation.

Research Questions and Hypotheses

Using Knowles' theory of adult learning as the foundation for implementing an accelerated, blended developmental reading course model, the research questions in this study were designed to compare student outcomes between accelerated, blended courses and traditional courses of developmental reading. To better understand the results of implementing accelerated, blended developmental reading courses, I used a causal-comparative approach to address the following research questions and hypotheses:

RQ1: Is there a statistically significant association between successful course completion rates of community college students who enroll in an accelerated, blended model of developmental reading instruction and students who enroll in a traditional developmental reading model of instruction?

$H_0$1: There is no statistically significant association between successful course completion rates of community college students who enroll in an accelerated, blended model of developmental reading instruction and students who enroll in the traditional course model.

H_A1: There is a statistically significant association between successful course completion rates of community college students who enroll in an accelerated, blended model of developmental reading instruction and students who enroll in the traditional course model.

RQ2: Is there a statistically significant difference in reading growth, as measured by a Lexile, between students who enroll in an accelerated, blended model of

developmental reading instruction and students who enroll in a traditional model of developmental reading instruction?

$H_0$2: There is no statistically significant difference in reading growth, as measured by a Lexile, between students who enroll in an accelerated, blended model of developmental reading instruction and students who enroll in a traditional model of developmental reading instruction.

H_A2: There is a statistically significant difference in reading growth, as measured by a Lexile, between students who enroll in an accelerated, blended model of developmental reading instruction and students who enroll in a traditional model of developmental reading instruction.

Review of the Literature

Theoretical Framework

The theoretical framework for this study was Knowles' (1970) theory of adult learning. Knowles developed the theory to focus on adult learning processes, termed andragogy, as opposed to the concept of pedagogy. At the inception of the theory, Knowles defined the framework as consisting of four primary assumptions: (a) adult learners become independent as they mature, (b) adults have an expansive schema to access for learning, (c) adult learners value education and have a sense of direction and purpose for learning, and (d) adult learners are ready and able to apply knowledge to practical situations immediately. In 1984, Knowles added the fifth assumption that adult learners are motivated by internal or intrinsic factors rather than external sources. At that time, Knowles offered direction for how to approach learning through and with

technology, recommending being clear with directions, providing contextualized tasks, allowing for differentiated instruction based on personal background experience, and providing scaffolding when needed.

With the growing demand for online coursework and integration of digital learning tools, one line of research inquiry based on the theory of adult learning involves the use of online learning tools (Henschke, 2016). Sharp (2018) analyzed adult students' perceptions related to using collaborative digital literacy tools in an online classroom to gauge their confidence levels and overall course outcomes. Even though students reported little to no familiarity with the digital literacy tools at the onset of the course, after participating in discussions, wikis, blogs, and course messages, students reported an increase in confidence with online learning and felt that the digital literacy tools were essential to the learning process in the course.

Similarly, Hussain (2019) reviewed student perceptions of tutors in an online course. Tutoring online is an andragogical component of distance education because it calls for students to build self-efficacy skills through the guidance of tutors. Over 80% of students in the study reported feelings of satisfaction with their tutors' knowledge and assistance with encouraging engagement in self-study techniques.

Adult learners are self-directed and find value in learning when process-oriented tasks result in immediate application to real-world problems (Henschke, 2016). Blackley and Sheffield (2015) surveyed adult students in a teacher education program regarding the use of technology tools. Most students reported as self-taught to use technology tools most relevant to their personal and educational needs, such as e-mail and Blackboard.

They further reported feeling confident and satisfied with their ability to navigate digital spaces whenever it was convenient to study. The results of their study also showed that technology allowed for bookmarks, digital receipts, and other submissions to mark progress and record online classroom participation.

According to adult learning theory, instructors in an online setting should facilitate rather than direct student learning (Allen, 2016). McDougall (2015) examined the use of digital literacy tools with nontraditional students in a foundational college-preparatory program. The students participated in several online discussion forums, including an informal chat forum. McDougall identified three themes in the students' forum responses: appreciation for others' perspectives, a sense of mutual respect and peer support, and feeling more prepared to take risks.

Knowles' theory guided the purpose, research questions, data sources, and data analysis of this study. The student participants were adults who, according to the theory, are independent learners, able to access prior knowledge to self-assess instructional needs, and can maintain motivation to complete coursework successfully. The theory informed data collection using a software program that includes embedded, formative assessments to assist adult learners with immediately applying new knowledge to authentic texts. I used the theory to inform data analysis through examining how well adult students' learning approaches and styles contributed to success in gaining literacy skills and academic achievement. While both course formats in this study engaged adult learners, the unique traits of mature students provided the lens through which to examine the hypotheses. According to the theory, the adult learners may be more likely to

experience an increase in literacy skills and academic success when provided a classroom structure that aligns with their distinctive attributes (Henschke, 2016).

Review of the Broader Literature

I located literature for this review using the following databases: ERIC, NCES, SAGE, ProQuest, and Education Source. The publications and research related to higher education and developmental education from professional organizations were then reviewed, including from the International Literacy Association, Community College Research Center, National Association for Developmental Education, and the Center for the Analysis of Postsecondary Readiness. Keyword search terms included the following: *developmental reading, literacy, community college, retention, attrition, course redesign, acceleration, blended learning, online learning, technology tools,* and *college readiness.* I used the following criteria to select the studies to include: peer reviewed; pertinence to the topic of developmental education; and published within the last 5 years, except for seminal studies. The total number of studies included in this review is 33. I identified three major themes in the body of research literature: the need for developmental course reform, accelerated developmental course designs, and technology use in developmental coursework.

The Need for Developmental Course Reform

While developmental education has been a component of education for more than a century, critics of remedial programs point to a variety of reasons why only 5% of students in developmental education will complete a certificate and only 2% will complete a degree within 2 years (Boylan & Trawick, 2015; Complete College America,

2019). Two significant national reports, *A Nation at Risk* (U.S. Department of Education, 1983) and Complete College America's (2012) critique were at the forefront of the national reform movement calling for educational institutions at all levels to reconsider ways to promote college enrollment and completion, particularly when students are underprepared for postsecondary learning (U.S. Department of Education, 2017).

Educators have attempted to determine reasons why some students are not prepared for college and have worked to establish better protocols for identifying, placing, and supporting students who require developmental coursework (U.S. Department of Education, 2017). Despite evidence that developmental education provides skill-building support for students who are not prepared for college-level coursework, some states have elected to exclude developmental education entirely due to the increased tuition costs and attrition rates for students in developmental education (Boylan et al., 2016; U.S. Department of Education, 2017). However, this approach may hinder the goal of increasing college graduation rates and reaping the social benefits of an educated populace (Borland et al., 2015; NCES, 2016). At present, one quarter of community colleges in the United States are reported as piloting alternative means of assessment, placement, and developmental course delivery methods (Boylan, Calderwood, & Bonham, 2017; Pratt, 2017).

Most studies involving the efficacy of developmental education have focused on degree completion (Bohlig et al., 2018). Students in developmental education may need to complete several courses in a developmental sequence of courses before enrolling in credit-bearing coursework related to a degree or certificate requirements (Xu, 2016). The

extended time it takes to complete developmental course sequences is a critical factor in long-term retention rates, with only 20% of students progressing past the first developmental course (Bailey, Jaggars, & Jenkins, 2015; Woods, Park, Hu, & Bertrand Jones, 2019).

In a meta-analysis of studies that examined the relationship between placement in developmental education, total number of earned credits, and degree completion, Valentine et al. (2017) found that college students who were placed into a variety of traditionally formatted developmental courses completed fewer college credits in more time and were less likely to complete a degree than students who did not take developmental courses. The adverse effects were most significant for students who took developmental reading courses. The researchers concluded that while many students need developmental education courses, the added time and costs associated with them are a deterrent to academic success. Two major initiatives have been implemented to address this problem: acceleration and modularized instruction.

Accelerated course models typically involve shortening courses from semester-long to 8 weeks in length (Jaggars, Hodara, Cho, & Xu, 2015). Because of this shortening, accelerated models are often referred to as condensed courses. When students are required to take two levels of a developmental course sequence, which is common, they can finish in half of the typical 16-week semester. Recent studies have indicated that students who took semester-long developmental coursework earn fewer total credits and degree-applicable credits than students who took accelerated developmental coursework (Hodara & Jaggars, 2014; Jaggars et al., 2015; Xu, 2016).

Woods et al. (2019) analyzed student outcomes in Florida, where developmental education placement testing is optional, and colleges are required to offer redesigned developmental courses, finding that students who tested two or more levels below a college reading level were more likely to opt out of developmental coursework, but they were also less likely to pass their initial college credit course, including freshman English. They also determined that students who tested as reading only one or two grade levels below a college reading level passed their initial college credit courses at a significantly higher rate than students who read two or more levels below a college reading level and opted to take credit-bearing courses instead of developmental courses. While researchers concluded the multiple measures used in the placement testing process contributed to some students' success in bypassing developmental courses, their findings also suggested the need to further investigate the effect of redesigned instructional modalities on student outcomes in developmental education.

In modularized instruction, specific skill deficits are targeted with software programs that enable students to work at their own pace to build skills that are prerequisites to degree-related coursework (Bailey et al., 2016; Martirosyan et al., 2017). Results have indicated significant increases in successful course completion rates, retention, and positive student responses for modularized math courses as compared to traditional developmental math courses (Okimoto & Heck, 2015; Parker, 2016). However, modularized instruction has not yet been investigated with developmental reading courses.

Preparing students for college-level, academic literacy challenges often includes developmental coursework; however, there is no consensus regarding the best way to support underprepared students while mitigating unintended consequences of extending students' time to matriculation and degree completion. The current reform movement to redesign developmental courses includes course redesigns to shorten sequences through acceleration.

Accelerated Developmental Course Designs

Due to increased attrition rates and tuition costs for students in developmental education, many institutions have implemented accelerated course designs to enable students to complete foundational coursework in less time (Bailey et al., 2015; Jaggars et al., 2015). Acceleration has the potential to close the achievement gap between underprepared and college-ready students by enabling students who need prerequisite coursework to move more quickly into degree-applicable coursework (Ganga et al., 2018).

Several studies have involved the exploration of perceptions of instructors of accelerated courses. The instructors in Vick's (2015) study reported that though their developmental English and reading courses were only 8 weeks in duration, they were able to provide opportunities to build community, provide frequent feedback, and incorporate active learning techniques. Similarly, Walker (2015) found that instructors of developmental math, English, and reading have been able to engage students, differentiate instruction, and address student motivation when courses were accelerated.

Several studies have involved comparisons of retention rates in various accelerated course redesigns. Williams (2016) found that when embedded supports were provided within accelerated, credit-bearing courses, the retention rate of 41% met the goal of the community college in which the study was conducted. Xu (2016) examined relationships between retention, the number of credits earned, and degree or certificate completion and found a higher negative relationship on all measures for students who took two traditional courses compared to students who took an upper-level developmental course.

Jaggars et al. (2015) investigated the effectiveness of 3 models of developmental English and two models of developmental math. The developmental English models included an accelerated English course, corequisite designed English course in which developmental support was embedded within the course, and developmental English as a prerequisite course. The developmental math models involved compressing a three-course sequence into two courses. Results showed that students in the accelerated models accrued a greater number of credits than students in the traditional developmental courses.

Findings from the body of research on accelerated course designs show the promise of accelerated developmental courses for improving the achievement and persistence of students. However, the research is quite limited and offers no evidence for the effectiveness of specific accelerated course designs.

Technology Use in Developmental Coursework

Online education and community college students. Online course enrollment is

the fastest-growing course model in colleges and universities nationwide, and the majority of students enrolled in online courses attend community colleges (Shea & Bidjerano, 2014; Snart, 2017). The increase in online learning platforms has presented an opportunity for course redesigns that may be a better fit for many community college students' lives (Gregory & Lampley, 2016; Sun, 2016).

Organizations such as the International Literacy Association (2017) and the College Reading and Learning Association (2018) have recognized that literacy learning is no longer restricted to physical classrooms or scheduled meeting times; students in higher education need literacy instruction that integrates technology tools. Current recommendations to address course completion and retention problems in developmental education have not involved redesigns that incorporate technologies in blended and fully online courses (Ganga et al., 2018).

Student perceptions of and outcomes in online and blended coursework. Critics of online college coursework cite poorer completion rates compared to students who take traditional, on-ground courses (Allen & Seaman, 2015). When Gregory and Lampley (2016) analyzed the academic success rates of community college students, they found that traditionally aged students were more likely to withdraw or fail online courses, and students who were classified as nontraditional were more likely to be successful in the same online sections.

With the rise in online and blended course offerings, researchers have examined students' perceptions and attitudes towards the technology tools necessary to succeed in online or blended coursework. Bauer (2018) conducted a study of 131 students who were

enrolled in developmental courses at a four-year college in the Midwest to explore students' perceptions of technology. While students felt technology could be distracting, it was a familiar tool necessary for learning in the 21st century. Walker (2015) found that even older students, who were nondigital natives, reported feeling more confident and satisfied with online learning experiences after engaging in collaboration and communication with their instructors and peers.

Several studies have involved analyzing the factors associated with student success in online or blended classes. Volchok (2018) studied student outcomes in a blended business course at an open-enrollment community college. Results indicated that 72.9% of students in the blended course sections completed the course with a grade of C or above, with the students' first quiz grade and extra credit opportunities as the most predictive factors in students' success in the course. Immediate and continuous engagement is a factor critical to student success in online courses.

Frequent and ongoing engagement with the instructor online, beginning with the initial assignments or quizzes, have been found to build student engagement and success in hybrid courses (Arghode, Brieger, & McLean, 2017; Volchok, 2018). Amhag (2015) explored students' perceptions related to engagement in blended classroom instruction based on individual, online interviews, and chats during webinar interactions. Results indicated that students were better prepared for class when they met face-to-face after collaborating with the instructor and peers online. Similarly, Arghode et al. (2017) found that when students are allowed more time to respond to discussion boards and submit work online, their responses were more likely to be accurate and thoughtful.

Technology integration and developmental courses. Some colleges have begun to experiment with online instruction in developmental courses, but no definite conclusions have emerged as to how results from mostly online institutions might translate to other contexts such as urban, open-access community colleges in which technology resources may be scarcer for students (Doherty, 2016). While limited research has been conducted in low-income, minority-serving community colleges related to accelerated developmental course programs, a characteristic of these programs is increased classroom contact time in computer lab classrooms (Williams, 2016). Hernen (2016) conducted a quasi-experimental study to investigate the influence of a blended developmental reading course on successful course completion rates and students' self-reported levels of satisfaction. Students in the blended course passed at a slightly higher rate than students in the traditional format sections, and students reported the blended modality was more conducive to attending class and completing assignments.

While online or blended developmental reading course formats have not been extensively studied, technology use in developmental education is pervasive and growing (Natow et al., 2017). Saxon, Martirosyan, Wentworth, and Boylan (2015) conducted a qualitative survey study of 141 developmental education professionals to identify the topics in developmental education that were most relevant and needed further research. The key areas identified by participants included instructional practices, retention, and new and emerging models such as technology platforms.

After Texas implemented state-mandated technology integration in developmental education courses, Martirosyan, Kennon, Saxon, Edmonson, and Skidmore (2017)

surveyed instructors about technology integration practices. Over 80% of respondents reported using technology tools in developmental education courses, ranging from the use of calculators to teaching blended and online courses with software programs such as MyReadingLab, the program used in this study (Pearson Education, 2019). Instructors reported that students preferred to use course tools that helped them extend learning through individual practice.

Outside of the course learning management system, many developmental courses include instructional software to target student skills (Martirosyan et al., 2017). Several studies have involved investigations of alignment between instructional software programs and institutional learning outcomes. Martin, Smith, Brasiel, and Sorensen (2017) examined the course content and learning outcomes of a textbook publisher well-known for marketing technology for developmental coursework. Data analysis revealed a low level of alignment between the online course objectives and national content standards established by the American Mathematical Association of Two-Year Colleges. The software used for developmental math targeted basic skills and did not cover other concepts required to pass college-credit math courses. The authors concluded that further study of software course content is needed. This study includes an analysis of student data from Pearson's MyReadingLab software (Pearson Education, 2019).

In addition to issues of course content alignment, studies on digital literacy tasks are relevant to the analysis of student performance in blended courses. Boudreaux (2016) conducted a quantitative survey study with students in a developmental English course to determine differences in ways students approached print versus electronic academic texts

given the need to identify ways students in developmental education manage course readings online. Results indicated that students who read academic texts online used the same metacognitive strategies as students who read print on paper.

Findings from the research on technology integration and developmental courses suggest while technology use in developmental education courses is pervasive and growing, there is a limited body of research related to the efficacy of blended developmental course designs, particularly in reading courses. The results of some studies suggest online coursework can be a significant attraction for community college students who can benefit from the flexibility of distance education. Although findings from many studies indicate that online coursework may be challenging for some students, others point to benefits for nontraditional students in community colleges. Based upon findings, it appears that nontraditional students might be more likely to experience confidence and familiarity with technology tools that support student engagement and pedagogy based on adult learning theory principles involving the importance of immediacy and practical application. Previous research on technology integration in developmental courses reveals the potential for further technology integration to assist instructors with differentiating instruction and accelerating developmental course completion.

Implications

Most students in online courses attend community colleges, and as the demand for educational technology integration grows, so does the need for course designs that increase student success and skills development (Snart, 2017). The National Center for

Education Evaluation and Regional Assistance identified 8 recommendations for improving outcomes for students in developmental education courses; one recommendation was to accelerate semester-long courses into shorter sequences (Bailey et al., 2016). Acceleration and technology integration combined have the potential to fill a gap in practice in course redesigns that can improve students' reading achievement and college persistence. The local community college has implemented accelerated, blended developmental reading courses using Blackboard Learn 9.1 and MyReadingLab. It is important to determine if students are more successful in the redesigned courses.

The qualitative studies in the preceding literature review indicated the desire and need for professional development related to implementing both accelerated developmental courses and developmental courses with technology integration (Saxon et al., 2015; Vick, 2015; Walker, 2015). As ubiquitous as technology has become in education, not all educators are comfortable with its implementation, particularly in developmental coursework (Martirosyan et al., 2017; Saxon et al., 2015). As a result, insights from this study might lead to improved outcomes for both students and faculty who participate in accelerated or blended developmental education courses and related professional development opportunities (Walker, 2015).

The results from this study could potentially guide faculty and administrators responsible for developmental course design and evaluation at the local level. Data from this study could help indicate curriculum development initiatives necessary for faculty to successfully implement developmental reading courses. Initiatives in both alternative

course design and instructional delivery could influence student success and retention rates in developmental reading courses.

The results of this study might also be shared with other disciplines in developmental education that seek improved learning outcomes and positive social change through greater persistence to college graduation. By providing more flexible opportunities to access and complete prerequisite coursework, students who have been traditionally academically underserved may be able to access and complete basic skill-building courses without time-consuming and costly traditional methods of remediation.

Summary

In Section 1, I outlined evidence of the local problem, the rationale for the study, critical terminology, the significance of the study, and research questions. After discussing a review of relevant literature, I offered methodological considerations and implications for using results from the study. Despite evidence that community college students benefit from literacy support in developmental reading courses, students who take developmental courses are less likely to earn a degree or certificate. A growing number of community colleges have implemented developmental coursework redesign models to improve students' success in these courses, but there is a gap in practice on redesigns that involve an accelerated, blended model of developmental reading instruction on reading achievement and college persistence. This quantitative causal-comparative study was based on Knowles' theory of adult learning. The theory of adult learning postulates that adults have the propensity to exercise self-awareness, internal motivation, and independent initiatives to make personal connections from their lives to

learning. The purpose of this study was to compare success rates for students who took an accelerated, blended developmental reading course and students who took a traditional, on-ground developmental reading course. The research questions investigated the difference in successful course completion rates and literacy skills for two fall semesters of developmental reading courses using archived data from 443 college students.

In Section 2, I describe the research methodology, including the research design and approach, setting and sample, instrumentation and materials, data collection, statistical analysis used, assumptions, scope, limitations, and delimitations. I also describe the measures I took for the protection of participants' rights.

Section 2: The Methodology

Research Design and Approach

In this study, I used a quantitative causal-comparative methodological design. According to Mills and Gay (2016), causal-comparative research is similar to experimental research in that both attempt to establish cause-effect relationships through group comparisons, but in causal-comparative research, the independent variable is not manipulated because it has already occurred. Causal-comparative research is also similar to correlational research in the lack of variable manipulation; however, causal-comparative studies seek to identify potential cause-effect relationships, whereas correlational studies do not (Mills & Gay, 2016). This design was selected because I investigated the difference in successful course completion rates and reading growth during two fall semesters of developmental reading from which data on student performance had already been collected. A causal-comparative design was appropriate for answering the research questions because student performance data had already been collected and archived by the college.

Setting and Sample

The setting for this study was an open-access community college in an urban area of the Midwest in the United States. Current total college enrollment is approximately 8,500 students.

The participants included 220 students who took the developmental reading course using an accelerated, blended learning format as the intervention group, and 223 students who took developmental reading in a traditional course format as the comparison

group. The criteria for participants included students who were placed in developmental reading because of placement test scores and high school transcripts. Students who did not demonstrate the ability to read on a college reading level were placed in the course. Students who did not take developmental reading courses were excluded. All students placed in developmental reading enrolled in the course format of their choice. I retrieved archival, deidentified data for the population of students enrolled in developmental reading courses in the fall semesters of 2018 and 2019.

According to the results of a power analysis with a significance of .05 and .80 level of power, typical of use in social science research, this study called for a sample of at least 64 participants in each group (Cohen, 2016). Using the G*Power calculator (Faul, Erdfelder, Lang, & Buchner, 2007), I determined a two-tailed *t* test of independent samples with a statistical significance of .05, power of .80, and a medium effect of d = .50 required a minimum of 128 total cases. A sensitivity analysis indicated .25 was the minimum effect size that can be detected with these parameters. The sample size for this study exceeded the minimum required number of 128 cases (N = 443).

Instrumentation and Materials

MyReadingLab (Pearson Education, 2019) includes formative and summative assessments that track changes in students' reading growth over time with Lexiles. A Lexile measurement is a scientific approach that has been used for more than 30 years to determine a student's ability to read levels of text complexity based on sentence length and word frequency (MetaMetrics, 2019). A reader's Lexile is a numeric, continuous variable on a ratio scale. The Intermediate level of MyReadingLab used in this study

yields Lexiles ranging from zero to 1,470. The reliability coefficient for Lexile reading tests has been measured as .95 (Stenner, Smith, Horabin, & Smith, 1987). In this study I used Lexile data that were deidentified and disaggregated by accelerated, blended sections and traditional sections of the courses.

I collected archived course completion rates from the local community college's database. The Statistical Package for the Social Sciences software was used to analyze the data and conduct necessary tests.

Quantitative data were used to answer the two research questions about differences in academic performance and reading achievement in two formats of developmental reading courses. I collected deidentified course grade reports from the college's Office of Institutional Effectiveness. Data analysts provided me with a spreadsheet of course sections labeled with their course delivery format and the number of students who enrolled in the sections. Data included students who completed the developmental reading courses in both the blended, accelerated format and the traditional format. The categorical number of students who did not successfully complete the courses (i.e., grades of D, F, or W) were compared to the categorical number of students who did successfully complete the courses (i.e., grades of A, B, or C). This variable was dichotomous in nature, with students who passed the course compared to students who did not pass the course. I received documented approval from the local setting to use archived, deidentified institutional data for this study on November 20, 2019.

I accessed deidentified data from the diagnostic tests and instructional modules within Pearson's MyReadingLab program (Pearson Education, 2019). I accessed this data

via an internal report request submitted to Pearson. Deidentified, archived, and ongoing data from MyReadingLab are available upon request from Pearson. MyReadingLab scores provided data tied to students' reading levels based on a Lexile measure. Students' Lexiles are determined with an initial diagnostic reading comprehension test and are monitored continuously throughout the course. Lexiles are numeric, continuous variables measured on a ratio scale, ranging from 0-1,470 within the Intermediate level of MyReadingLab (Pearson Education, 2019).

Protection of Participants' Rights

I used only archived data in this study. Each semester, course completion data and MyReadingLab information are collected and stored in institutional computer databases at the local community college. All data collected for analysis in this study were deidentified and disaggregated by a data analyst at the local community college to protect the participants' anonymity. Due to the inability to link identifiable details about participants to the archived data, this study was exempt under 46.101(b)(4), the policy set forth by the Office for Human Research Protections (2016). Walden University Institutional Review Board approved data collection on January 16, 2020. The approval number is 01-16-20-0653581.

The data used in this project study was kept on a password-protected computer to which only I had access. The information will be deleted after a 5-year period.

Data Collection and Analysis

I analyzed successful course completion rates from both traditional and accelerated, blended developmental reading courses. The grades indicating successful

course completion were derived from the final grades issued at the end of each reading course from the fall semester of 2018 and the fall semester of 2019. Grades were deidentified and obtained from the college's data analyst.

I also collected numeric Lexile scores from Pearson's MyReadingLab software program from both traditional and accelerated, blended developmental reading courses. Students' initial Lexile measurements are taken at the onset of each course, and a final Lexile is calculated at the end of each course. Students' Lexiles were collected from Pearson directly, then deidentified and disaggregated by section, including the fall semester of 2018 and the fall semester of 2019. The independent variable in this study was the course delivery format, and the dependent variables were successful course completion rates and MyReadingLab Lexile scores.

For the first variable, I conducted a chi-square analysis to assess the association between the independent variable of course format type and the dependent variable of the number of students who successfully completed the course compared to the number of students who did not successfully complete the course. A chi-square test of independence was an appropriate test for these variables because they are both nominal, categorical variables. The course format was the independent, dichotomous variable: the traditional format of developmental reading and the blended, accelerated format of developmental reading. The number of students successfully completing the courses was also a dichotomous variable: students who passed the course, and students who did not pass the course.

With a chi-square analysis, it is assumed that all cell frequencies will be greater than five, and a *p* value less than .05 indicates a statistically significant association between the variables. I used cross tabulations to assess the association between the course format and successful course completion rates. To determine the effect size of the results, I used the phi coefficient (Triola, 2018).

The second dependent variable in this study was students' Lexile levels, obtained from archived MyReadingLab data. I used the independent means *t* test with this variable because it is appropriate for comparing the means of two categorical groups as they relate to one metric level variable. With a *t* test for independent samples, it is assumed there will be no significant outliers, there is a normal distribution of variables in each group, and there will be equal variance of the independent variable in each group. If the independent *t* test indicates statistical significance ($p < .05$), any observed differences in the means of the variables are unlikely due to chance and the null hypothesis should be rejected. However, other factors must be considered when deciding because a small *p* value cannot be the deciding factor for strength of the relationship (American Statistical Association, 2016).

I used Cohen's *d* to determine the effect size of the means between the two groups to determine practical significance. Even if the sample populations of the groups are not homogenous or demonstrate normal distribution, the risk of either a Type I or Type II error is decreased with sample sizes above 20 or 30 cases, as was the case in this study (Cohen, 2013). According to Cohen's (1988, 2013) general guidelines related to strength, a coefficient value greater than .5 indicates a large or strong association.

Assumptions, Limitations, Scope, and Delimitations

A primary assumption was that students were appropriately placed in developmental reading courses; students who did not meet the prerequisites for the courses were not admitted to the classes. I also assumed that students in both formats of developmental reading courses exerted honest efforts on placement exams. Another assumption was that while both traditional and accelerated, blended courses targeted the same scope and sequence of course objectives, individual instructors had differences in personal teaching strategies. Finally, I assumed that any differences in students' Lexile growth or successful course completion rates were attributable to the course format and that the student profiles were similar.

The scope of this study involved comparing measures of the dependent variables: successful course completion rates and reading achievement for students who have completed developmental reading courses in a traditional, face-to-face model of instruction and accelerated, blended developmental model of instruction. The model of instruction was the independent variable.

One limitation of the causal-comparative design was a lack of randomization. A causal-comparative approach is suitable for studies in which the researcher has little or no control over the assignment of participants to the experimental and control groups (Creswell & Creswell, 2017). As Burkholder, Cox, and Crawford (2016) explained, using truly randomly assigned participants and groupings can help control the threat of alternative explanations for results and increase generalization. Babbie (2017) further confirmed the preference of beginning a study with truly comparable groups of

participants. If it is not possible to randomize participants, as in this study, Burkholder et al. recommended controlling for other variables related to the participants.

With ex post facto data, it is difficult to establish equivalency between the experimental and control groups (Babbie, 2017); however, in this study, all participants had the same educational level (less than an associate's degree, but at least a high school diploma, or a General Education Diploma, and met criteria for inclusion that included a qualifying reading score. The local setting uses multiple measures for placement in the advising process; it is a limitation that while all students in this study were placed in developmental reading, individual students' placement information was unknown.

Additionally, students may have had biases when selecting a course format at the time of enrollment. Students may have elected to take a traditional format of the developmental reading course based on their personal perceptions related to comfort with technology and access to technology outside of the classroom. Students may have chosen the accelerated, blended course format to fit their schedules without consideration of their motivation to work independently. During the enrollment process, advisors may have discussed the differences in course formats and either intentionally or unintentionally favored one over the other in their suggestions to students.

Access to technology off campus may have also contributed to internal validity threats. Because I did not control for whether students have consistent access to technology at home in this study, it is unknown whether this was a factor in differences between students' success in traditional versus accelerated, blended courses.

I conducted this study at an urban, open-access community college in the Midwest of the United States; the setting could also contribute to a transferability limitation. Community colleges are not the only postsecondary institutions that offer or require developmental education courses; it is unknown whether the results of this study might be applicable to 4-year colleges and universities in other contexts.

This study was limited to examining students in developmental reading courses without consideration of the students' other courses. I was unable to collect data related to students' overall coursework and course load, eliminating the possibility that differences in means between the course formats may be attributable to differences in individuals' schedules. This study was also limited to quantitative, archived data related to students' course performance without respect to qualitative considerations that may influence differences in means between the course formats.

Data Analysis Results

The purpose of this project was to examine associations between the course delivery format of developmental reading, student achievement, and reading level growth. The first research question focused on testing the association between successful course completion rates of community college students who enrolled in an accelerated, blended model of developmental reading instruction and students who enrolled in a traditional developmental reading model of instruction. To answer this question, chi-square analysis was conducted.

The chi-square crosstabs analysis showed a statistically significant association between course format and the percentage of students successfully passing the course

(see Table 1). The total sample included 443 students, 223 students who took the traditional developmental reading course format, and 220 students who took the blended, accelerated developmental reading course format. Based on course completion results, students who took the traditional format of developmental reading were less likely to pass the course, compared to students who took the blended, accelerated format of developmental reading $\varphi = .180$, $p < .05$. Therefore, the null hypothesis that there was no association between these variables was rejected.

Test assumptions were met; as seen in Table 1, all expected cell frequencies were greater than five. As depicted in Table 2, the results were significant, $\chi 2(1, N = 443) = 14.285$, $p < .001$. Based on course completion results, students who took the traditional format of developmental reading were less likely to pass the course compared to students who took the blended, accelerated format of developmental reading.

As shown in Table 1, 67.7% of students who took the traditional course format passed the course, as opposed to 83.2% of students who took an accelerated, blended format of developmental reading. Figure 1 provides a visual representation of the proportions of students who passed and failed each course format. However, as seen in Table 3, there was a weak statistical association between course format and course completion, phi = .180 (Rea & Parker, 1992).

Table 1

Association Between Course Format and Course Completion

Course format		Grade		Total
		Fail	Pass	
Traditional course	Count	72	151	223
	Expected count	54.9	168.1	223.0
	% within course format	32.3%	67.7%	100.0%
	% within grade	66.1%	45.2%	50.3%
	% of total	16.3%	34.1%	50.3%
Blended course	Count	37	183	220
	Expected count	54.1	165.9	220.0
	% within course format	16.8%	83.2%	100.0%
	% within grade	33.9%	54.8%	49.7%
	% of total	8.4%	41.3%	49.7%
Total	Count	109	334	443
	Expected count	109.0	334.0	443.0
	% within course format	24.6%	75.4%	100.0%
	% within grade	100.0%	100.0%	100.0%
	% of total	24.6%	75.4%	100.0%

As seen in Table 2, there was a statistically significant association between course format and successful course completion, $\chi 2(1) = 14.285$, $p < 001$. A Fisher's Exact test was conducted between course format and successful course completion (see Table 2). There was a statistically significant association between course format and successful course completion, $p < .001$. Based on the statistical significance of the results, I can reject the null hypothesis that there is no association between course format and successful course completion.

Table 2

Chi-Square Tests of Association

	Value	*df*	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson chi-square	14.285[a]	1	.000		
Continuity correction[b]	13.463	1	.000		
Likelihood ratio	14.490	1	.000		
Fisher's exact test				.000	.000
Linear-by-linear association	14.252	1	.000		
N of valid cases	443				

[a.] 0 cells (0.0%) have expected count less than 5. The minimum expected count is 54.13.
[b.] Computed only for a 2x2 table

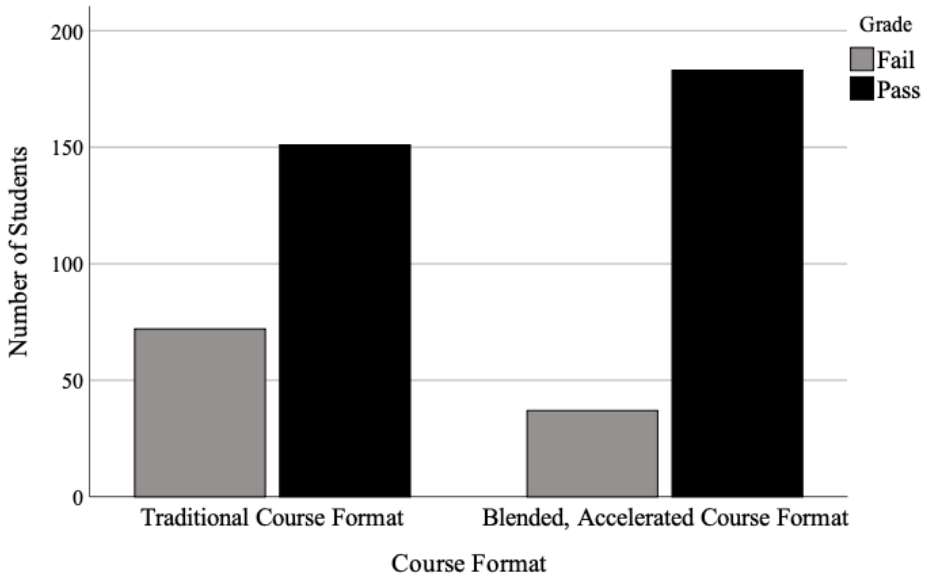

Figure 1. Comparison of students who passed or failed by course format.

However, hypothesis rejection alone is insufficient when interpreting the data; the effect of the magnitude or practical significance must be considered, as well (Kirk, 1996). The strength of the association between variables for both research questions was low, $\varphi = .180$, $p < .05$ for the chi-square analysis and Cohen's $d = .15$ for the *t* test. As seen in

Table 3, there was a weak association or effect size between course format and successful course completion, φ = 0.180, p <.05. This numerically weak association could indicate little relevance to real-world application; however, in the case of this study, there was still practical importance found. It is notable that data analysis showed that students passed the blended, accelerated course format at a significantly higher rate than students who took the traditional course format, and there was no evidence that taking the blended, accelerated course model negatively influenced students' ability to pass the course. The results suggest that students can successfully complete a blended, accelerated model of developmental reading in half of the time as students who take the traditional course model.

Table 3

Tests of Practical Significance

		Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Nominal by nominal	Phi	.180			.000
	Cramer's V	.180			.000
	Contingency coefficient	.177			.000
Interval by interval	Pearson's R	.180	.046	3.833	.000[c]
Ordinal by ordinal	Spearman correlation	.180	.046	3.833	.000[c]
N of valid cases		443			

To address the second research question, an independent samples t test was conducted to determine if there was a statistically significant difference in mean Lexile growth between community college students who enrolled in an accelerated, blended

model of developmental reading instruction and students who enrolled in a traditional developmental reading model of instruction. As shown in Table 4, a *t* test for independent samples indicated students' initial Lexile scores in both course formats were similar in distribution; any differences in growth at the end of the course are less likely to be attributed to group differences in Lexile at the onset of the course.

Table 4

Independent Samples Test of Initial Lexile Scores

		Levene's test for equality of variances		*T* test for equality of means		
		F	Sig.	*t*	*df*	Sig. (2-tailed)
Initial lexile	Equal variances assumed	1.465	.227	-1.478	397	.140
	Equal variances not assumed			-1.480	371.585	.140

The *t* test for independent samples did not show a statistically significant difference between course format and students' mean Lexile growth. There were 173 students in the traditional course format sample and 226 students in the accelerated, blended course format sample. The mean Lexile increase for the accelerated, blended group (M = 111.43, SD = 124.16) was slightly higher than the mean Lexile increase of the traditional course format group (M = 92.46, SD = 119.20). However, the results were not statistically significant between the means (p >.05); therefore, the alternative hypothesis was rejected, and the null hypothesis was accepted.

The assumption of equality of variances was evaluated and there was no violation of the assumption (p = .826). There was not a statistically significant difference between traditional (M = 92.46, SD = 119.205) and blended (M = 111.43, SD = 124.16); $t(397)$ = -1.539, p = .125 (two-tailed). Therefore, the null hypothesis was accepted. The magnitude of the difference in the means (mean difference = -18.973, 95% CI = -43.21 to 5.265) was small (Cohen's d = .15).

The effect size, or practical significance, was measured with Cohen's d to measure the standardized difference between the means. The small effect size indicates weak practical significance for the course format. This frequently occurs in studies with larger sample sizes and serves to assist with rejecting the null hypothesis. However, effect size requires human interpretation; a small effect size does not always indicate a lack of practical significance in the sense of real-world application (Kirk, 2007). Practical importance can be found in findings showing that students can successfully complete a blended, accelerated model of developmental reading in half of the time and demonstrate statistically greater reading growth when compared to students who take the traditional course model.

As seen in Table 5, students who took the traditional format of developmental reading (n = 173) gained a mean Lexile increase of 92.46 *(*M = 92.46, SD = 119.205). By comparison, students who took the accelerated, blended format of developmental reading (n = 226) gained an average of 111.43 Lexile points (M = 111.43, SD = 124.166).

Table 5

Mean Differences in Lexile Growth

	Course format	*N*	*Mean*	*SD*	*SEM*
Lexile growth	Traditional format	173	92.46	119.205	9.063
	Blended format	226	111.43	124.166	8.259

Figure 2 depicts a boxplot identifying several outliers; however, all but one outlier pinpoints cases where students achieved reading growth well above the mean for both the traditional and accelerated, blended course formats. As noted in the limitations of the study, other variables could contribute to differences in students' Lexile growth, affecting students' individual experiences in their developmental reading coursework.

There is no standard Lexile growth guideline for students; each student will progress depending on their developmental stage (Briggs, 2013). Lexile growth as a measurement is not a fixed attribute; growth goals vary among students and may be influenced by factors such as norms from other studies, students' career goals, and students' educational plans (Williamson, 2006). Therefore, the outliers shown in Figure 2 were retained to reflect an accurate representation of the varying degrees of student goals and achievement in this study.

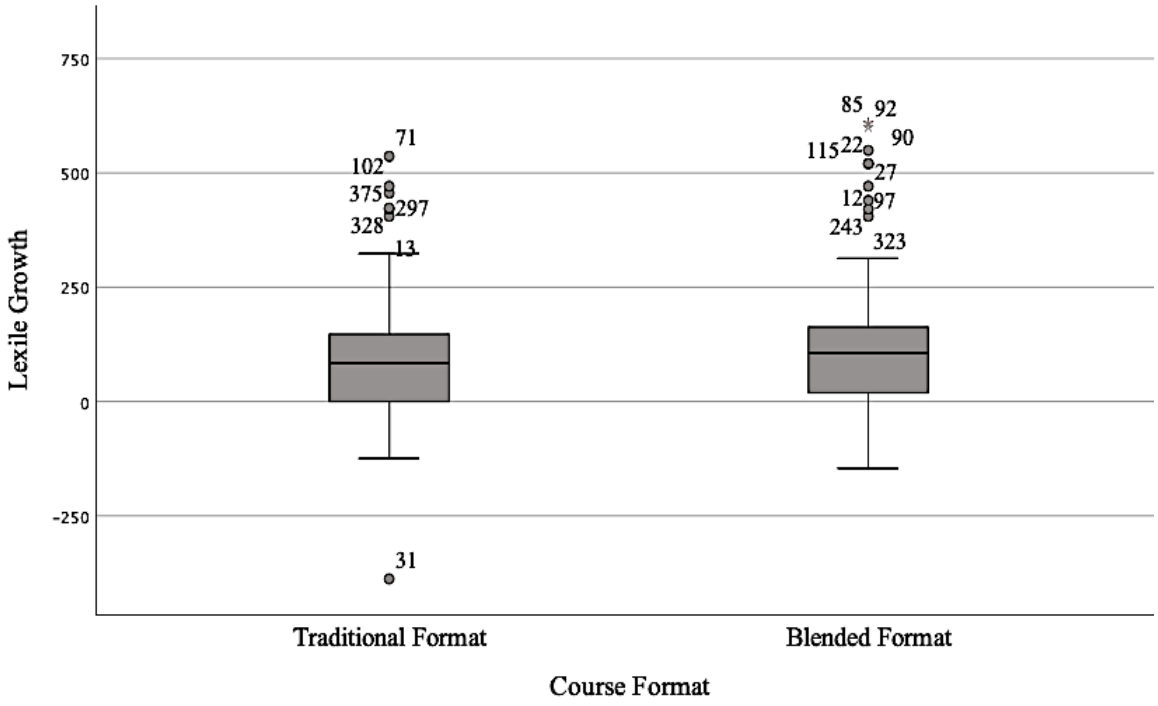

Figure 2. Lexile growth comparison.

The data used in this analysis violated the assumption of normal distribution. As seen in Table 6, the Shapiro-Wilk test was used to test for normality; results were not reported as being on a normal curve. Figure 3 shows Lexiles in the traditional course format were nonnormally distributed with a skewness of .65 (*SE* = .19) and a kurtosis of 2.74 (*SE* = .37).

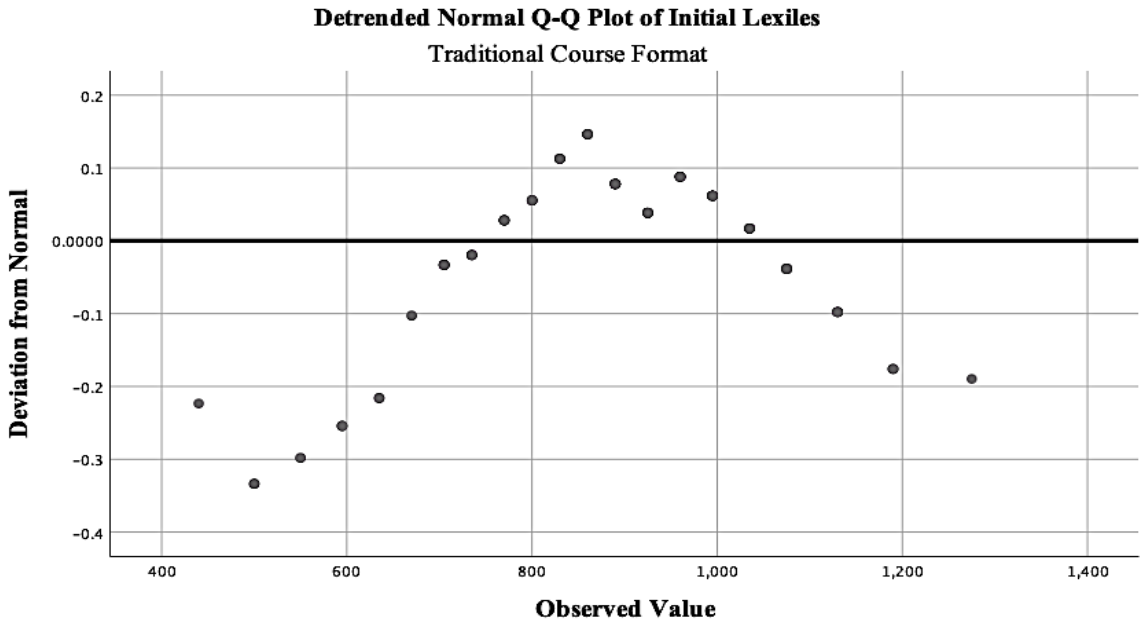

Figure 3. Traditional course format initial Lexile measures.

As seen in Figure 4, Lexiles in the blended course format were also nonnormally distributed with a skewness of 1.46 (*SE* = .16) and a kurtosis of 3.82 (*SE* = .32).

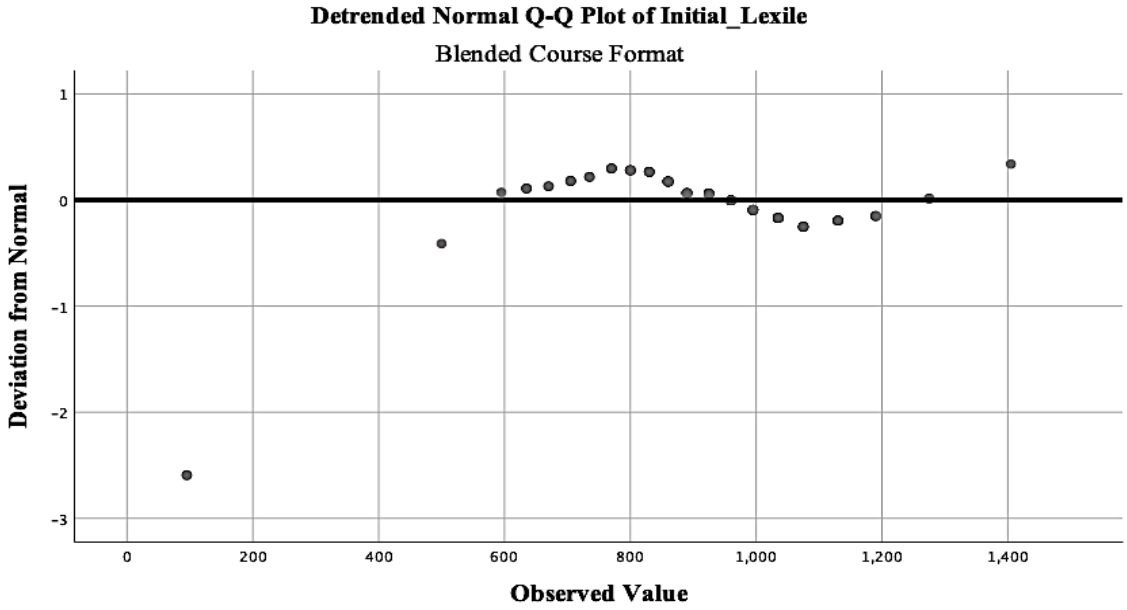

Figure 4. Blended course format initial Lexile measures.

Despite the nonnormal distribution of data, the sample size of this study (399 cases for this test) is large enough to control for Type I errors (Ghasemi & Zahediasl, 2012). Furthermore, a *t* test is a robust statistical test that can withstand normality assumption violations, allowing for the analysis of the test to be included as presenting accurate findings (Laerd Statistics, 2020).

Table 6

Tests of Normality by Course Format

		Shapiro-Wilk		
	Course Format	Statistic	*df*	Sig.
Lexile growth	Traditional format	.927	173	.000*
	Blended format	.747	226	.000*

Note. *Denotes data that are not on a normal curve.

The homogeneity of variances was tested and satisfied with Levene's test for equality of variances, as seen in Table 7 ($p = .826$). Levene's test for equality of variances tests that the two groups are drawn from populations with the same variance. This was an appropriate test to analyze the data since the data were not normally distributed (Laerd Statistics, 2020). There was homogeneity of variances, as assessed by Levene's test for equality of variances ($p = .826$).

Table 7

Test for Equality of Variances

		Levene's test for equality of variances		*T* test for equality of means		
		F	Sig.	*t*	*df*	Sig. (2-tailed)
Lexile growth	Equal variances assumed	.048	.826	-1.539	397	.125
	Equal variances not assumed			-1.547	377.362	.123

Summary

Based on the results of this study, students completed the same developmental reading course content in a blended, accelerated format with comparable results in terms of success and growth in reading skills as students who took the traditional course format. There was statistical significance for the first research question, no statistically significant difference for the second research question, and weak practical significance for both research questions.

Findings support the benefit of saving time and money by implementing the blended, accelerated course format. Results indicate the promise of pursuing a real-world application by expanding the blended, accelerated course format of developmental reading to other colleges. Greater student success in developmental courses could potentially avoid student attrition, greater tuition costs, and extended time to graduation or program completion because of the lengthy and often repetitious developmental courses taken by many college students.

Adult learners value immediacy and practicality in application of learning; this aspect of andragogy is highlighted by course models that value adult learners' time and motivation (Conaway & Zorn-Arnold, 2016; Knowles, 1984). Adult learners have unique attributes; their experiences and backgrounds can be beneficial to new academic experiences, but the traditional structures of postsecondary education learning environments can present obstacles to work and family obligations (Gregory & Lampley, 2016). A blended, accelerated developmental reading course format considers adult learners' prior learning experiences and current learning styles needs.

Scaling up new instructional models is a challenge in developmental education, in part due to the need for more evidence that technology integration and acceleration are effective, and evidence based (Saxon et al., 2015). As instructional models such as blended, accelerated developmental reading courses are implemented, scholars and practitioners will look for evidence-based results. Because many colleges and universities use pedagogical teaching principles instead of andragogical teaching principles based on adult learning theory, it is important to develop curriculum for adult learners that appropriately engages college students and addresses their specific needs (Conaway & Zorn-Arnold, 2016). As a result, an appropriate deliverable for this project study is a curriculum plan for a blended, accelerated developmental reading course.

Section 3: The Project

Introduction

The purpose of this study was to compare both successful course completion rates and reading growth for students in traditional developmental reading courses and students in blended, accelerated developmental reading courses. The results were statistically significant for the first research question and led me to consider the importance of developing a blended, accelerated developmental reading curriculum to encompass principles of andragogy in tandem with technology integration. As a result of the findings from this study, I developed a 9-week curriculum plan for implementing a blended, accelerated developmental reading program (see Appendix).

The goal of this proposed curriculum plan is to provide an instructional model of developmental reading that is supported by principles of andragogy to assist adult community college students with completing developmental coursework in less time than traditional course formats. Based on Knowles' (1984) theory of adult learning, the 9-week, blended learning sections of developmental reading provide students with accelerated movement through the course and potentially increased motivation stemming from more self-control over their own learning.

The proposed curriculum includes a syllabus that details the course outcomes, activities, modules, and grading information. The specific details of the curriculum are provided in a course schedule, including weekly checklists and instructor notes.

Rationale

In this study, I focused on the problem of lengthy developmental course sequences and their contribution to the increased attrition rate for college students requiring remediation. Three themes emerged from the literature review in Section 1: need for developmental education course reform, acceleration of developmental courses, and technology integration with developmental coursework. The data in Section 2 indicated that implementing a blended, accelerated model of developmental reading instruction could provide foundational reading skill instruction in half of the time as the traditional course format without compromising students' ability to pass the course or gain expected reading level growth. I developed this proposed project to encompass all three of those components, resulting in a 9-week, blended, accelerated developmental reading curriculum.

Review of the Literature

In the following literature review, I provide a synthesis and analysis of how theory and research support the development of a 9-week, blended, accelerated developmental reading curriculum. This literature review was conducted using the following databases: ERIC, NCES, SAGE, ProQuest, and Education Source. Publications and research related to higher education and developmental education from professional organizations were also reviewed, including from Complete College America, Community College Research Center, National Organization for Student Success, and the Center for the Analysis of Postsecondary Readiness. Keywords search terms included the following: *developmental reading, developmental education, literacy, community college,*

andragogy, curriculum, course redesign, acceleration, blended learning, technology, and *online learning.*

I used the following criteria for search results to reach saturation for this literature review: peer-reviewed sources; relevance to the project genre and topic; and published within the last 5 years, except for seminal studies. The total number of recent studies included in this review is 36. This literature review covers the major components of this project study deliverable: andragogy and its application to curriculum development, implementing modularization, applying a student-centered focus, and incorporating technology with flipped-learning strategies to implement a blended model of instruction.

Project Genre: Andragogy and Curriculum Development

According to andragogical teaching principles, developmental reading curriculum at the postsecondary level should be designed to support adult learners who need literacy skills development while pursuing a college education (Henschke, 2016). Because these populations of struggling readers will persist, it is critical for developmental reading program coordinators to design curriculum that engages adult learners, addresses appropriate learning outcomes, and focuses on an andragogical approach to instruction. Gray's (1936) seminal description of developmental reading at the college level affirmed that teaching methodologies should encompass reading improvement as a lifelong activity and be reflective of adult students' literacy needs. However, other researchers have suggested many postsecondary reading programs have been implemented with pedagogical methodologies designed for children and younger learners (Armstrong, Stahl, & Kantner, 2015; Stahl & Armstrong, 2018). I developed the curriculum for the

current project to merge the purpose of developmental reading with content and employ an andragogical theoretical foundation.

Andragogy belongs to the family of constructivist theories, establishing a student-centered, reflective approach to curriculum construction and delivery (Halpern & Tucker, 2015; Knowles, 1984). Research findings have indicated that instructors' knowledge of and proficiency with andragogical teaching principles is closely tied to students' academic motivation; content knowledge alone is insufficient to promote students' success (Bourdeaux & Schoenack, 2016; Knowles, 1989; Sogunro, 2017).

In recent years, research findings have indicated that emerging technology tools and platforms have become critical pieces of approaches that offer flexibility alongside individualized and contextualized curriculum for adults (Allen, 2016). While online and distance learning models initially targeted adults with the intention of helping adults balance career, family, and academic responsibilities, it has been found that the convenience of asynchronous learning alone is not enough to motivate and engage adult learners (Allen, 2016; Hickey, Robinson, Fiorini, & Feng, 2020).

To develop a student-centered curriculum grounded in adult learning theory, these research findings indicate the importance of addressing two key considerations: students' academic needs and students' expectations. One consideration is the importance of understanding students' expectations for what they will learn in a developmental reading course (i.e., how content applies to them) and how they perceive learning will occur (i.e., the process). The curriculum in this project attends to the affective domain of adult students' lives by incorporating a blended, accelerated format to provide a flexible

learning environment. The second consideration is to ensure that the online components of the course are aligned with the needs of adult learners. Curriculum should incorporate what adult students expect from online instruction: clear expectations and objectives, mutual respect and robust communication, and focused, intentional course design (Bourdeaux & Schoenack, 2016; Hickey et al., 2020).

Project Content

Modularization. As shown from the research literature reviewed in Section 1, students who are required to take developmental education courses prior to credit-bearing, degree-related courses experience higher attrition rates and are less likely to complete a college degree or certificate. One factor related to higher attrition rates is the time it takes to complete developmental courses (Bickerstaff, Fay, & Trimble, 2016). The results from this project study indicated that accelerating the curriculum for developmental reading courses allows students to complete the courses in half of the time as traditional courses without compromising skill development or ability to successfully pass the course.

Developmental education curriculum can be accelerated in a variety of ways, including corequisite instruction; intensive, skills-based academic "boot camps"; modularized, self-paced instruction; alternate placement processes that eliminate developmental courses; and acceleration through compression, or shortening the length of a course (Bickerstaff, Fay, & Trimble, 2016; U.S. Department of Education, 2017). The accelerated model in the curriculum developed for this project study is a shortened course format that includes corequisite texts and modularized instruction. The following

curriculum also employs principles of andragogy: Students are self-directed, have opportunities to share and validate their learning with faculty and peers, and have ample opportunities to immediately apply knowledge and skills (Knowles, 1980).

Accelerated learning formats offer students the opportunity to complete courses in less time; however, essential course content is still retained. The curriculum developed for this project study covers all major course outcomes within the developmental reading program. Traditional activities, such as group projects, campus-wide events, and other social events that would normally take place in a 16-week course, are eliminated in an accelerated course. Adult learners have reported neutral or negative associations related to these aspects of a traditional college education that do not directly connect to academic or career goals (Hickey et al., 2020; Lo, Reeves, Jenkins, & Parkman, 2016).

Adult learners prefer accelerated learning formats, but they require an adult-centered, student-centered approach from faculty to support individualized academic success (Miller, 2017). For example, developmental math programs have been developed to accelerate learning through modularized instruction in a model referred to as emporium, in which students work at their own pace to complete modules as a means of completing developmental education requirements (Cousins-Cooper, Staley, Kim, & Luke, 2017; Wilder & Berry, 2016). Though students in a modularized course format might accelerate through the course outcomes faster than a traditional course, research findings have indicated that without established due dates or a timeline for completing modules, many students spend more than an academic year completing module requirements (Bickerstaff, Fay, & Trimble, 2016; Childers & Lu, 2017; Hickey et al.,

2020; Hu et al., 2016). Adult learners understand personal challenges to completing coursework, recognize personal responsibility, and have an increased commitment to deadlines compared to younger peers (Bohl, Haak, & Shrestha, 2017). This characteristic of adult learners supports an accelerated course model that allows for self-directed assignments and tasks with concrete due dates and clear expectations.

The blended, accelerated developmental reading course format in the project curriculum integrates modularized skills-based work with contextualized reading tasks that are delivered both online and face-to-face with established due dates and opportunities for practice and assistance in reaching the goal of successfully completing the course content in 9 weeks. Incorporating modularized instruction with an established workflow will increase student engagement through embedded, formative assessment, and the efficient and streamlined instructional cycle will provides a stable framework for instructors to use the curriculum for building their own courses (Pahl, 2017).

Although accelerated course formats have not consistently been found to produce higher student achievement, the accelerated course format can be more efficient due to covering only essential course content and using class time to explore concepts in depth, particularly when the class is both accelerated and blended (Patchan, Schunn, Sieg, & McLaughlin, 2016).

Learner-centered focus. The theory of adult learning suggests that instruction should address adult learners' traits on the individual level, including their desire to learn, self-concept, life experiences, intrinsic motivation, need to know, and orientation to learning (Knowles, 1970, 1984, 1989; Knowles et al., 2005). The evolution toward

online learning and educational technology tools align closely with the principles of andragogy and are congruent with the premise of learner-centered curriculum (Galustyan, Borovikova, Polivaeva, Kodirov, & Zhirkova, 2019).

As diverse populations of students, in terms of age, life circumstances, and previous education, attend community colleges, it is considered essential for instructors and curriculum designers to be cognizant of learners' strengths, challenges, and instructional needs (Rodesiler & McGuire, 2015). Universal design for instruction (UDI) is a framework used in designing curriculum to increase access and engagement for all students (Rodesiler & McGuire, 2015). While some students may need accessibility accommodations, such as text-to-speech adaptability or the use of accessible fonts and colors, UDI also addresses differentiated instruction to support different learning styles. Several components of the curriculum project include principles of UDI and differentiated instruction, resulting in a learner-centered curriculum.

It has been suggested that a learner-centered curriculum should begin with the course syllabus because this is the instructor's first opportunity to share not only practical course information but also communicate their teaching philosophy and disposition toward students (Cullen & Harris, 2009; Richmond, 2016). As one of the first pieces of communication between instructor and student, the syllabus can establish a sense of community, the power relationship between the instructor and students, and assessment processes (Cullen, Harris, & Hill, 2012). A learner-centered syllabus is included with this project in the Appendix.

Research findings have shown that a learner-centered curriculum is integral to supporting students who need literacy instruction as reading growth is individual. As growth varies from student to student, it is recommended that assessment must drive placement and progress goals (Francis, Kulesz, & Benoit, 2018; Tomlinson, 2017). In the project curriculum, students will be administered an initial diagnostic test that measures their reading level. Also, in accordance with research findings, throughout the course, students will read self-selected passages within their individual reading achievement range. Furthermore, individual growth goals will be discussed and mutually agreed upon between the student and instructor; self-selected readings reflect a learner-centered perspective, and grades will be based on growth while also addressing the broader course outcomes (Flink, 2017; Tomlinson, 2017).

According to experts in learner-centered curriculum, assessment and evaluation are at the core of a learner-centered curriculum; a learner-centered classroom is also an assessment-centered classroom (Cullen & Harris, 2009; Tomlinson, 2014, 2015). A learner-centered curriculum aligns assessments to student learning outcomes with the expectation that all students can work to achieve the goals of the outcomes with the assistance of scaffolding or differentiation (Tomlinson, 2015). Experts have noted learner-centered curriculum is accessible to all students even though they may have different paths to mastering the outcomes; restructuring instruction by teaching to mastery or adjusting pacing has been shown to be an effective differentiation strategy with struggling readers (Ortliebe & McDowell, 2016; Tomlinson, 2015).

Research shows that students in learner-centered classrooms perform better when graded against themselves more than one another; embedded, formative assessments should be built into the curriculum to provide both students and teachers with information to help monitor learning and adjust instructional goals (Tomlinson, 2017; Wiliam, 2018). Within the proposed curriculum, students participate in assessment processes that are learner-centered: embedded, formative, ongoing, and summative.

While a teacher-centered curriculum focuses on high-stakes, summative assessments, a learner-centered curriculum is intended to provide a variety of opportunities for students and teachers to review assessment data and adjust instruction based on results (Spooner, 2015). That is, in a learner-centered curriculum, students have opportunities to review frequent, ongoing formative feedback without penalty to their grades, and there are additional attempts available for most assignments (Spooner, 2015; Tomlinson, 2017). Furthermore, assessment within a learner-centered curriculum is expected to be a recursive process involving evaluation of the curriculum content, products for evaluation, and learning processes (Spooner, 2015).

In the following proposed curriculum, students are required to engage in their own assessment of learning while the instructor provides differentiated opportunities to demonstrate progress toward mastering curricular content to reflect effective learner-centered practices (Tomlinson, 2015; Weimer, 2013).

Project Delivery: Flipped Learning within a Blended Course

Research findings have shown that blending course curriculum by "flipping" course content can help instructors and students cover a greater amount of course content

more efficiently, particularly in an accelerated course model (Patchan et al., 2016). Bergmann and Sams (2012) established the formal foundation for flipped learning strategies in their initial work in which students watched video lectures for homework and during class, students engaged in typical homework activities such as practice problems, modular work, and other formative assessments with the teacher present for guidance. Bergmann and Sams (2014, 2015) acknowledged there is no singular way to implement flipped learning; reading lessons can be flipped with print reading assignments or students can interact with leveled texts and differentiated activities online. Researchers have suggested that students can view and review instructional, skills-based content at their own pace as many times as they need to be prepared for in-class work (Bergmann & Sams, 2015).

An example of this practice from the proposed curriculum involves students reviewing videos and direct instruction components from the instructor and modules in MyReadingLab while at home. Students then take short, formative quizzes online before coming to class. Once in class, students have the opportunity to discuss the lesson content and receive assistance from the instructor during application and analysis of skills. Scaffolding and differentiation continue in class, which lead toward summative assessment in the learning cycle.

While flipped learning as an instructional approach has evolved, the premise remains the same: students complete work outside of class and during class, the teacher offers guidance and support while students carry out activities in which they practice new skills and engage in higher-order thinking (Bergmann & Sams, 2012; Patchan et al.,

2016). Direct instruction and lower-level thinking activities from Bloom's revised taxonomy, such as remembering and recall, take place outside of class in the flipped learning model while higher-order thinking activities, such as evaluating and creating, take place during face-to-face class time (Wedlock & Growe, 2017).

When designing flipped learning components, research findings suggest that teachers begin with the question of how face-to-face time is best used (Bergmann & Sams, 2012). While not all blended classes use flipped learning, it is a common feature of blended learning classes (Zainuddin & Halili, 2016). And while not all blended classes incorporate technology with flipped learning, it has been found that instructional technology in the form of computer-based programs and online interventions can be an integral part of a blended curriculum, providing an efficient means of differentiating instruction (Bauer-Kealey & Mather, 2019; Piotrowski & Witte, 2016; Talbert, 2017). The proposed curriculum in this project study incorporates instructional technology within a blended model of instruction.

Research has shown adult students learn best when they are able to review content individually, determine individual experiences they can apply to the new content, and generate evidence of learning and questions for extending learning (Schechter, Kazakoff, Bundschuh, Prescott, & Macaruso, 2017). Within a flipped classroom context, adult students engage with direct instruction individually outside of class and extend the learning process during face-to-face class time. The curriculum project includes flipped learning activities with interactive e-text activities, review and quiz games for mobile devices, short videos, and online tutorials. These activities have been shown to increase

student engagement due to the motivation to be prepared by completing assignments outside of class (Andrade & Coutinho, 2017; Bergmann & Sams, 2012; Enfield, 2016).

Project Description

I designed a 9-week curriculum plan to provide students placed in developmental reading courses the opportunity to experience an accelerated, blended format. Based on the results of the project study, the goal of the curriculum is to replace the traditional, on-ground 16-week developmental course with a 9-week, blended, accelerated developmental reading course to increase student success and retention.

Necessary Resources, Existing Supports, and Potential Barriers

The local setting has already provided the necessary supports and resources to scale up implementation of the blended, accelerated developmental reading curriculum to all course sections. Administrators and other faculty members support research-based practices to improve student success and retention. The division dean who oversees the developmental reading program is supportive of developmental course redesign, and the reading department faculty are committed to regularly reviewing curriculum and implementing changes that benefit students.

A potential barrier involves communication with the board of trustees and other division deans. The dean of enrollment management had previously suggested that developmental coursework was unnecessary and should be minimized, if not eliminated. I expect that the evidence from the project research study will be compelling in convincing these individuals about the benefits of the 9-week curriculum.

Implementation Timetable

I will share the revised curriculum with all department faculty members at the end of the spring 2020 semester. I will present a summary of the data from the project research study along with the revised course model to my division dean and other members of the college's Strategic Enrollment and Retention committee through Microsoft SharePoint and Teams sites. I will provide any requested information to other stakeholders and committees through the Faculty Senate or Academic Policies Committee.

During the summer of 2020, I will conduct department meetings with the reading faculty to provide professional development and instructional support for migrating traditional, 16-week classes to the new, blended, accelerated, 9-week model. The fall 2020 and spring 2021 schedules will be adjusted to reflect a scaled-up implementation of blended, accelerated, 9-week developmental reading sections. The developmental reading program implementation and evaluation timeline is outlined in the Evaluation Matrix in the Appendix.

Roles and Responsibilities

As the developmental reading department coordinator, I am responsible for disseminating the data from this project research study along with the project curriculum. The reading department faculty will be responsible for reviewing the data and curriculum to provide feedback and additional input. The division dean will be responsible for communicating with the vice president of academic affairs about program updates and to request that curriculum changes be included on relevant committee meeting agendas.

Other faculty and relevant stakeholders will review the program changes and curriculum, provide feedback, and relay questions to the reading department.

Project Evaluation Plan

The developmental reading curriculum will use an outcomes-based evaluation plan (see Appendix) and reflect recommendations from the research literature on the importance for program outcomes to represent benchmarks of a program's purpose and provide a framework for data collection and evaluation (Chen, 2015; Spaulding, 2014). The evaluation plan includes a timeline for collecting both formative and summative data related to the following outcomes: capacity/intent, validation, activity fidelity, participant satisfaction, intermediate outcomes, final outcomes, and sustainability.

Stakeholders, especially those with control over program funding, are most interested in whether evaluators can review program outcomes for evidence of implementation success (Spaulding, 2014). In the case of this developmental reading program, the purpose and evaluation goals of the program align across levels of the higher-education system: local level retention and pass rates, comparison to state averages of success in developmental courses, and successful implementation and collaboration with national and international efforts to remediate college students' skills more effectively. The program objectives are to increase student pass rates, reading skill development, and retention in developmental reading courses.

Administrators at the local setting will want to see fiscal benefits that include increasing the number of sections and enrollment while maintaining full time equivalent enrollments each semester. It is expected that students will value less expensive course

materials and tuition in the accelerated, blended courses. The board of trustees will be concerned with the budget as well as how the college compares to others in the area and nation when it comes to developmental course delivery. The community might be interested in how the college can assist individuals who want to attend or return to college but who have academic literacy needs.

Other faculty members on campus will want to understand how developmental coursework relates to students' enrollment processes when they are selecting degree programs. The reading department faculty will also need to know how the evaluation might impact future curriculum changes, data reporting, and even scheduling changes. As a result of the diverse needs of stakeholders, I will disseminate the findings of my evaluation in multiple ways based on all these stakeholders' needs.

For the board of trustees and campus administrators, I can present at a regular meeting and provide copies of the presentation and supplementary data. The reading department faculty will be involved in the evaluation process. As faculty members generate questions or concerns throughout the process, I can collect data through questionnaires using electronic means to be shared at department meetings. Faculty members will also need to communicate directly with students through their roles as instructors and program advisors. I can create a brochure and separate presentation for advisers to help with placing students in developmental reading courses. Students and community members may prefer to access program information from the college website or through e-mails.

Project Implications

The developmental reading curriculum has implications for positive social change at the local setting. A current policy change wave in postsecondary literacy instruction is related to course design and implementation. Based on Knowles' (1984) theory of adult learning, the 9-week, blended, accelerated sections of developmental reading will be implemented for students to accelerate through developmental coursework. Adding the component of flipped learning may increase student motivation stemming from more self-control over learning.

The findings from the project research study showed that student success in the 9-week, blended, accelerated developmental reading courses was significantly better than that of students in the 16-week, traditional developmental reading courses. Students who can complete developmental coursework in less time will matriculate into credit-bearing degree-related work in less time, resulting in a reduction in tuition costs and an increase in the likelihood that these students will complete a degree or certificate program.

The results from this study and the accompanying curriculum will be shared with other local community colleges and developmental education faculty. Sharing this information with other higher education institutions can help further the social agenda of supporting students who need literacy support to benefit from post-secondary education.

Section 4: Reflections and Conclusions

Project Strengths and Limitations

The project curriculum is based on findings from the project study that showed students who are placed in developmental reading courses can be successful in a blended, accelerated course format. A strength of this project is that it addresses developmental course redesign by integrating instructional methods that have been shown to be successful with adult learners, including self-directed modularization, flipped learning strategies, and accelerated course content (Hickey et al., 2020; Lo et al., 2016; Miller, 2017; Patchan et al., 2016).

There are two potential limitations to successfully implementing the curriculum: changes to student placement procedures and engaging adjunct faculty in the implementation process. One of the policy recommendations for developmental education programs is to adjust placement procedures to include multiple measures during the advising process (Bailey et al., 2016). Going forward, if placement measures at the local setting change, skills of students who enroll in developmental reading courses may vary from the population in this study.

A second limitation is tied to part-time faculty. Most of the faculty who teach developmental reading courses at the local setting are adjunct instructors. According to research, 67.7% of all 2-year public college instructors are adjunct faculty members (Ginder, Kelly-Reid, & Mann, 2017). Research findings have indicated that adjunct faculty have diverse backgrounds, needs, and motivations that should be recognized when implementing institutional changes, and so, part-time faculty members should be

included in decision-making processes (Wagoner, 2019). Collaboration and professional development for curriculum implementation will need to be tailored to fit each instructor's needs.

Recommendations for Alternative Approaches

Based on the findings of this project study, I suggest two alternative approaches to the problem. The first alternative approach would be to explore the attitudes and perceptions of students who are placed into developmental reading at the local site. Qualitative data could help focus developmental course reform by incorporating the affective components that may influence adult learners' ability to be successful in developmental reading courses. Depending on students' responses, the reading course delivery model could be further revised to provide relevant and necessary supports.

A second alternative approach would be to consider integrating developmental reading and developmental English courses at the local setting to offer a different method of acceleration. In the current study, I focused only on developmental reading courses; integrated developmental reading and writing courses are another format of acceleration that has been shown to increase student success (Bailey et al., 2016).

Scholarship, Project Development and Evaluation, and Leadership and Change

Throughout the process of completing my doctoral journey and this project study, I have experienced growth as a scholar, practitioner, and project developer. As a scholar, I have read more extensively and critically about my research interests related to developmental education. I have been able to share my work at a conference and engage in more critical dialogue with colleagues in the field of postsecondary, developmental

education. I have also been able to apply my newfound knowledge to identify a gap in the literature, consider questions related to the problem, and design a research study that contributes to the body of literature on the topic of developmental reading course design.

As a practitioner, I have been able to examine data tied to the blended, accelerated course model I developed and implemented at the local setting. I have also been able to focus on the iterative approach of rereading, analyzing, and revising my work. It is a learner-centered practice to consistently receive feedback and consider how to incorporate changes to make improvements. It is a process I expect my own students to engage in, and because I personally have experienced the benefits of it throughout this program, I plan to continue to provide planned, on-going, formative feedback and ask students to use it. While reviewing my work at the conclusion of this study, I found myself rethinking everything from concepts I could have included (or omitted) to grammatical constructs of my writing. Accepting the challenge of asking myself to engage in more learner-centered practices with my own academic work has been incredibly valuable.

As a project developer, I have honed my skills related to curriculum design and the alignment of outcomes to activities and assessments that are learner-centered and appropriate for adult learners. I have learned about the various methods of evaluating a curriculum from multiple stakeholders' viewpoints. As a developmental reading department coordinator, I can use my knowledge and experience from this process to help enact positive social change within my classroom and across campus for all students who take developmental reading courses.

Reflection of Importance of the Work

The curriculum model in this project study is important to the body of literature related to developmental course reform because it is a model that has not been studied before. Researchers at the forefront of developmental education reform have proposed several possible solutions to increase student retention and course success rates, but this model has not yet been studied (Bailey et al., 2016). The proposed curriculum in this project study is also important because it addresses both a gap in the literature and a gap in practice. Scaling up this model of blended, accelerated instruction has the potential to bring attention to and awareness of how to better design developmental courses to fit the needs of adult learners.

Implications, Applications, and Directions for Future Research

Because a model of the framework for the project curriculum has been implemented successfully in some courses at the local site, it is likely that by scaling up the course model at the institutional level, more students can successfully complete developmental reading courses in less time. Furthermore, sharing the findings from this project study with other institutions has the potential to contribute to developmental course reform at other colleges, impacting students on a national level. At a minimum, the findings of this study and the resulting curriculum can provide the impetus for future and ongoing dialogue with colleagues who are interested in developmental education course reform.

I plan to recommend that the local setting continue to collect and analyze data from the developmental reading courses to monitor any trends related to students' grades,

retention, and withdrawals. As the department coordinator, I plan to continue to collect and analyze data from all developmental reading courses to look for any extreme deviations from past course performance related to students' reading level growth.

Conclusion

Open-access community colleges seek to attract all levels of students but by requiring lengthy developmental coursework sequences, many underprepared students are unwilling or unable to persist (Hodara & Jaggars, 2014). Alternative course models, such as the one examined in this project study, may offer a viable option for students who are placed in developmental reading courses.

The results of this project study indicated that students can successfully complete accelerated, blended developmental reading courses. If students can spend less time and less money related to developmental coursework, they have an increased likelihood of completing a certificate or degree (Ganga et al., 2018).

There is a need in postsecondary education to improve the retention rates of students who test into developmental courses and close the achievement gap with other students. Given that the drop-out rates are greater and tuition costs are higher for these at-risk students because of extended course, further research is needed for ways to promote successful developmental coursework completion (Valentine et al., 2017). The benefits of successfully redesigning developmental courses include an increase in successful college graduation; higher incomes and socioeconomic status for more individuals; and even more importantly, a more well-educated populous who will contribute to positive social change on a local and global scale.

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Appendix: The Project

Proposed Blended, Accelerated Developmental Reading Course Syllabus

Course Title: READ XXXX College Reading Strategies 3 Credit Hours

Instructor Information

E-mail
Office
Phone
Office Hours

You can contact me or leave a message 24/7 via the Remind app. I will typically respond between the hours of 7:00 AM and 8:00 PM, but you may send messages any time.

Course Prerequisite (Placement – Why am I in this class?)

An assessment score of 60-74 on the Accuplacer Classic, **or** a score of 240-255 on the Accuplacer Next Generation test. Note: The college uses multiple measures for placement. If you have questions about your placement, please see your advisor or ask your instructor.

Course Description

College Reading Strategies is designed for students to further develop general reading skills. Students will learn college-level reading strategies with an emphasis on higher levels of academic reading skills. Students will continue vocabulary development and employ strategies for reading and comprehending a variety of academic texts. This course focuses on inference, analytical reasoning, and critical thinking skills.

Required Textbook and Materials

Visit the college bookstore in-person or online at www.xxxxxxxxxxx.com

Bridging the Gap by Brenda D. Smith and Leann Morris, 13th ed. The textbook includes an access card for MyReadingLab. **You must have the book and access code by the second week of class to avoid interruptions to your coursework. Temporary access is only valid for 14 days. Failure to obtain the access code will result in missed assignments/tests/points and may result in failing the course. Please do not buy the book used from Amazon, ebay or other online merchants. Used books will not have the required access code.**

Your textbook is loose-leaf (that makes it less expensive, but you might lose pages!). I recommend buying a binder/notebook for your textbook.

Instructional Philosophy (Why do I teach the way I do?)

This class will focus on defining and correcting reading difficulties. A great emphasis will be placed on helping students discover areas of interest in a variety of reading materials. Students will work at a level where they can experience both success and growth.

Students will learn reading strategies within whole group instruction, through guided practice in small groups or individually, through independent practice, and by using a variety of instructional technology tools, including MyReadingLab.

I believe whole-heartedly that students will excel in reading if they are excited about the content and experience a literacy-rich environment both in school and at home. It is my intent to guide students towards finding their "niche" in literacy as well as life. I believe that there is a book out there for everyone!

Additionally, I believe that reading instruction is not just about print texts. It is important for students to talk about reading and see and hear multiple representations of a text to better understand what they read.

Method of Instruction

A variety of instructional methods may be used depending on the content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, conferencing, performances, and learning experiences outside the classroom. The methodology will be selected to best meet student needs.

***This course is blended and accelerated. You must have access to a computer and the internet outside of class. While we will meet face-to-face each week, you will be responsible for completing tasks online before and after class. It is important to pay attention to due dates on MyReadingLab and Blackboard.**

There are several computer labs located throughout the college campuses. The Learning Commons is also open in the evenings and on Saturdays. Please refer to college websites for up-to-date information and hours for labs if you need computer access on campus.

Course Outline

Week 1: Course Foundations/Syllabus/Establish a Routine
Part I: Foundational Reading Skills
Week 2: Chapter 1: Active Academic Reading Chapter 2: Strategic Reading and Study Chapter 3: Organizing Textbook Information for Study
Week 3: Chapter 4: Vocabulary
Week 4: Chapter 5: Main Idea and Supporting Details Chapter 6: Patterns of Organization
Part II: Analytical and Critical Reading Skills
Week 5: Chapter 7: Inference
Week 6: Chapter 8: Point of View
Week 7: Chapter 9: Reading/Interpreting Graphics
Week 8: Chapter 10: Critical Thinking
Week 9: Summative Assessments and Course Reflection/Evaluation

Expected Learner Outcomes (What will I learn in this class?)

1. Demonstrate increased reading comprehension using a variety of metacognitive strategies.

2. Demonstrate vocabulary growth and development using a variety of word study strategies: context clues, roots/prefixes/suffixes, connotation and denotation, punctuation, and dictionary use.

3. Utilize textbook and/or content area text reading strategies to increase comprehension and improve study skills.

4. Apply critical reading and critical thinking skills to include inference, critical reading and thinking, evaluation of arguments, and determining the author's purpose.

Types of Assignments

- MyReadingLab module work
- Reading and annotating a variety print text
- Composing short summaries to show comprehension
- Reading passages with increasing levels of complexity to push reading level growth
- Chapter tests over the textbook contents
- In-class discussion and active learning participation

Assessment of Learner Outcomes (How will I be graded?)

Students will receive a letter grade for the course. Student mastery of course competencies will be determined by pre and post-tests in MyReadingLab (Lexile Locator, Path Builder, and Mastery Check).

There will be mastery tests for each chapter and a Final Exam that will include skills from chapters in the textbook. There will also be weekly reading quizzes over the assigned chapters.

For each chapter/unit of study, you will complete one or more study modules in MyReadingLab. You will also complete assigned selections from the textbook that include written responses.

For in-class work, see the above "Types of Assignments" heading.

You are responsible for reading **and** annotating each chapter in your textbook. Reading is thinking, and writing is evidence of your thinking!

Grading Policies

A grade of a C (70%) or better may be required in this class before enrollment in other courses is permitted.
Grading will be based on the following levels of mastery of the stated competencies:
A 90-100% B 80-89% C 70-79% D 60-69% F 0-59%

Attendance and Withdrawal Policy

You are expected to attend and to complete the class. Because this class is essential to student academic success, withdrawal from this class is discouraged. If you do withdraw, you will be required to re-enroll in this class for the next semester. **It is your responsibility to be aware of drop/withdrawal dates and deadlines. If you do not withdraw from the course and you are failing, you may receive a failing grade on your transcript. If you are ill or experience an unplanned absence, you must communicate this via the Remind app, e-mail, or voicemail.**

***Blended Sections: After THREE absences, you may be withdrawn from the course. If you reach/exceed THREE absences after the official date to withdraw and/or do not take the final exam, you will need to repeat the course.**
***If you are more than 15 minutes late to class, you may be counted absent. If you arrive late and miss an assignment or test, you may not be able to make it up.**
***Assignments for in-class activities/participation cannot be made-up unless you arrange to attend another section of my class or attend Literacy Lab time.**

Due Date Policy

*Due dates for all MyReadingLab and Blackboard assignments will be clearly posted in multiple places. I will send weekly reminders through the Remind app to help you complete work on time. Most assignments will be due by 11:59 PM on Sundays. You are strongly encouraged not to wait until the last minute to begin work.

***If you do not request the day's assignments on the day you are absent, you may not be able to make up missed work. Additionally, the Mid-Term and Final exams may not be made up. These tests must be taken in class.**

Your grade will be in Blackboard on the **"MyGrades"** link located on the left-hand side of your course home page. You are strongly encouraged to monitor your progress on a weekly basis.

FAQ'S (I have questions, and I need help!)

Where do I go if I need help with technology?

The Help Desk is located in XXX. They can help you with password resets, e-mail, and other applications. There is also a mobile app on their website that you can download: www.xxx.com. Their phone number is XXX-XXX-XXXX.

Where do I go if I need tutoring?

The lower level of the Learning Commons is the place to visit for tutoring services. They can provide online assistance with writing assignments, as well.

If I am at home, and I can't get MyReadingLab to load/work, what should I do?

1) Make sure you are using Chrome for your browser. Do not use Explorer, Safari, Firefox, or Edge. Chrome is the most compatible browser for Blackboard and MyReadingLab.

2) Make sure your pop-up blockers are off. Many parts of MyReadingLab use pop-ups.

3) Make sure your browser accepts cookies.

4) Run the "Browser Check" on your Course Home page.

5) In your Chrome settings, clear your cache and cookies.

6) Message the instructor and ask for guidance. Include a screenshot of the problem. You can attach images in the Remind app, too.

7) Call or chat with Pearson Student Support.

8) There is a link in your Blackboard course to check the status of Pearson products. MyReadingLab might be down or undergoing maintenance, so check the status page for updates.

Special Notes: (College Policies)

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

The college is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. The college is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

All enrolled students at the college are subject to follow all rules, conditions, policies, and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both documents and to understand their responsibilities regarding academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the college website.

The college has a Prohibited Weapons Policy applicable to all students, staff, and guests of the college. All weapons are prohibited on college property except as permitted under the limited circumstances described in the Weapons Policy and under state law. Please refer to the Student Handbook for more information. Anyone who witnesses a violation of the Weapons Policy should contact Campus Police. Violations of federal, state or local laws or college policies may result in discipline up to and including expulsion from the college, criminal charges and monetary fines for personal injuries and property damage.

The college offers an equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on nondiscrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy is made known. The college complies with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Student Services Office.

Proposed 9-Week Blended, Accelerated Course Schedule

Week	Topic	Assignment Checklist
Week 1	Course Foundations/Syllabus/Routines	1) Watch the course overview video. 2) Sign up for Remind alerts. 3) Review the syllabus and take the syllabus quiz in Blackboard. 4) Purchase your textbook and register for MyReadingLab. 5) Submit your literacy autoethnography assignment through Flipgrid.
Week 2	Chapter 1: Active Academic Reading Chapter 2: Strategic Reading and Study Chapter 3: Organizing Textbook Information for Study	1) Complete the Path Builder in MyReadingLab. 2) Complete the Initial Lexile Diagnostic. 3) Conference to set Lexile increase goal. 4) Complete modules 3.21 and 3.2. 5) Take the chapters 1-3 test.
Week 3	Chapter 4: Vocabulary	1) Read chapter 4 in your textbook. 2) Complete the Panopto video and quiz. 3) Complete module 3.2. 4) Take the chapter 4 test. 5) Complete one "Next Reading." 6) Schedule mid-term conference.
Week 4	Chapter 5: Main Idea and Supporting Details Chapter 6: Patterns of Organization	1) Read chapters 5 and 6 in your textbook. 2) Complete module 3.7. 3) Complete one "Next Reading." 4) GIST main idea activity in Flipgrid. 5) Kahoot! quiz. 6) Submit Objective Summary assignment.
Week 5	Chapter 7: Inference	1) Read chapter 7 in your textbook. 2) Complete the Panopto video and quiz. 3) Complete module 3.19. 4) Read "Story of an Hour" and complete guided reading activity.

		5) Complete the inference discussion board activity. 6) Take the chapter 7 test.
Week 6	Chapter 8: Point of View	1) Read chapter 8 in your textbook. 2) Complete the Panopto video and quiz. 3) Complete module 3.18. 4) Complete one "Next Reading." 5) Complete the Flipgrid activity. 6) Take the chapter 8 test.
Week 7	Chapter 9: Reading/Interpreting Graphics	1) Read chapter 9 in your textbook. 2) Complete the Panopto video and quiz. 3) Complete module 3.22. 4) Bias in nonfiction discussion assignment.
Week 8	Chapter 10: Critical Thinking	1) Read chapter 10 in your textbook. 2) Complete the Panopto video and quiz. 3) Complete module 3.20
Week 9	Summative Assessments and Course Reflection/Evaluation	1) Complete self-assessments of growth. 2) Complete module 3.27. 3) Take the Mastery Check post-test. 4) Take the Final Exam. 5) Final conference with instructor.

Blended, Accelerated Developmental Reading Course Alignment Matrix

Course Outcomes:

1. Demonstrate increased reading comprehension using a variety of metacognitive strategies.
2. Demonstrate vocabulary growth and development using a variety of word study strategies: context clues, roots/prefixes/suffixes, connotation and denotation, punctuation, and dictionary use.
3. Utilize textbook and/or content area text reading strategies to increase comprehension and improve study skills.
4. Apply critical reading and critical thinking skills to include inference, critical reading and thinking, evaluation of arguments, and determining the author's purpose.

Lesson Outcome	**Before Class (Remembering, Understanding)**	**During Class (including formative assessments) (Applying, Analyzing, Evaluating, Creating)**	**Summative Assessment (Proof required to show they know)**
1.1 Identify stated and implied main ideas and their supporting minor and major d	Overview, Model, and Animation for modules 3.3, 3.4, and 3.5. Complete Recall exercises.	Practices for modules 3.3, 3.4, and 3.5 MyReadingLab post-tests for modules 3.3, 3.4, 3.5	Chapters 5 and 6 tests Compose an objective summary using the steps to identify the main idea and pattern of organization. Module 3.7: summarizing and paraphrasing.
1.2 Summarize and/or paraphrase content of written passages using patterns of organization as a guide.	Read chapter 5 in your textbook. Panopto Video and Quiz Read chapter 6 in your textbook. Kahoot! Quiz	Read-Aloud and Think-Aloud of Selection 1: "The Dark Side of Food Science." MyReadingLab module 3.8: combined patterns. GIST summarizing activity. Work through drafting an objective summary.	
1.3 Draw conclusions and generate inferences based on information given in written	Read chapter 7 in your textbook. Complete the Panopto video and quiz.	Read "Story of an Hour" together in class. Think-aloud through author's purpose, imagery, symbolism, and context.	Chapter 7 test.

passages or visual texts that include critical analysis based on figurative or biased language and author's tone and purpose.	Complete module 3.19 Overview, Model, Animation, and Recall.	Complete inference sheet.	Module 3.19 post-test. Discussion board activity.
2.1 Utilize context to gather clues to meaning of unknown words, which include stated definitions, implied definitions, synonyms, antonyms, and punctuation.	Read chapter 4 in your textbook. Complete module 3.2 Overview, Model, Animation, and Recall.	Complete a vocabulary concept map using unknown vocabulary word from SSR or other text. Complete module 3.2 practices 1, 2, and 3 in class.	Chapter 4 Test in Blackboard Module 3.2 post-test. Lexile increase check.
2.2 Utilize knowledge of word analysis (prefixes, roots, suffixes and meanings) to determine the meaning of unknown words.	Review chapter 4. Kahoot! Quiz	Complete word part exercises from the textbook and online.	
2.3 Select appropriate dictionary definitions for words with multiple meanings, distinguishing between connotative and denotative meanings.	Review chapter 4. Panopto Video and Quiz	Complete exercises on slanted language. Read a news article and write two paragraphs: one with objective language and one with connotative language.	
3.1 Locate and record key concepts by highlighting and annotating text	Read selected material from chapters 1, 2, and 3 in your textbook. Panopto video and quiz.	Google Images assignment of annotations.	Chapter 3 Test in Blackboard Evidence of annotated textbook notes graded with annotating scoring guide.
3.2 Create a notetaking or study method using outlining, mapping, timelines, organized notes, or summaries.	Review Chapter 3. Choose a method of notetaking and take lecture notes from another class or online lecture.	Complete the Cornell Notetaking Handout over Chapter 3.	

	Flipgrid picture of notes.	Using document camera, the instructor will read and annotate Selection 1 from the textbook to model.	Modules 3.21 and 3.25 post-tests.
3.3 Demonstrate evidence of applying before, during, and after reading strategies within written notes and study materials.	Review chapter 2 of your textbook. Modules 3.21 and 3.25 Overview, Model, Animation, and Recall.	Paired note-taking activity in class. In-class Read Aloud/Think Aloud to model the strategy. Think-Pair-Share with an additional content area text. MyReadingLab modules 3.25, and 3.21 practices.	
4.1 Utilize critical reading strategies to recognize author's purpose or intent, point of view, bias and tone.	Read chapter 8 in your textbook. Complete the Panopto video and quiz. Complete Module 3.18 Overview, Model, Animation, and Recall.	Read Selection 2 from Chapter 8. Complete the "Analytical Reasoning" and "Interpret the Quote" activities. Flipgrid assignment.	Chapter 8 test in Blackboard. Chapter 9 test in Blackboard.
4.2 Distinguish fact from opinion.	Read chapter 9 in your textbook.	MyReadingLab Practices 1, 2, and 3 for modules 3.17, 3.20, and 3.22.	Chapter 10 Test in Blackboard.
4.3 Recognize valid and invalid supports for arguments.	Complete the Panopto video and quiz. Complete module 3.22 Overview, Model, Animation, and Recall. Read chapter 10 in your textbook. Complete the Panopto video and quiz. Complete module 3.20 Overview, Model, Animation, and Recall.	Discussion board post analyzing a politically biased article.	Modules 3.18, 3.20, and 3.22 post-tests.

Developmental Reading Program Logic Model

Program Title: Developmental Reading Program					
Inputs		**Activities**		**Outcomes**	
Program Resources	**Activities**	**Products of Activities**	**Short-Term**	**Intermediate**	**Long-Term**
1. Qualified Developmental Reading Faculty 2. Developmental Reading Department Budget 3. Technology-Integrated Classrooms 4. Advising Staff 5. Curricular Materials: Pearson's textbook *Bridging the Gap*, 12th ed. and the companion software, MyReadingLab (MRL) 6. Local data from the college's Office of Institutional Effectiveness 7. Research and data resources on	1. Conduct professional development (PD) sessions each semester with department faculty. Organize on-demand PD from Pearson. 2. Review the department budget for current and projected expenditures. 3. Collaborate with the scheduling office and division dean to utilize classrooms with computers and internet access. 4. Train advisors regarding reading course design and placement procedures. 5. Coordinate with Pearson to schedule training and customize student materials.	1. Six reading specialists are trained to teach compressed and blended courses with MRL. 2. A budget is created and approved for the fiscal year. 3. All developmental reading courses are taught in technology integrated and supported classrooms with computers, instructor podium with document camera, and both wired and wireless internet. 4. Advisors place students in reading courses based on multiple measures.	1. Increased student enrollment due to more flexible course redesign. 2. Increased student engagement as demonstrated by reading level growth and skills mastery. 3. Increased alignment with best practices in literacy instruction that incorporates technology and new literacies.	1. Transitioned overall master scheduling changes in response to student enrollment trends in the new, accelerated and blended courses. 2. Engaged students in frequent formative assessments and trained faculty to use responsive teaching techniques to build motivation for students in the compressed model of classes. 3. Utilized both formative and summative assessment data from the Office of Institutional Effectiveness to	1. By fall 2021, there will be a 10% or more increase in the number of students who successfully completed the developmental reading course sequence with a grade of "C" or better. 2. By fall 2021, there will be a 10% or more increase in the number of students who achieve a college-ready reading level as measured by MRL. 3. By fall 2021, there will be a 10% or more increase in the number of students who are retained and successfully pass credit-bearing program courses after

developmental course redesign initiatives from peer-reviewed, local, national, and international organizations and foundations.	6. The college Office of Institutional Effectiveness will provide both immediate/recent and longitudinal data for students placed in developmental reading courses. 7. Developmental reading faculty will join multiple organizations dedicated to literacy and remediation.	5. Developmental reading faculty were able to review pass and retention rates for students taking both models of reading courses – 16-week on-ground and 8-week blended. 6. Developmental reading faculty will attend conferences and review developmental reading research.		monitor the accelerated, blended courses' pass and retention rates.	matriculation from the developmental reading program.

Revised Developmental Reading Program Evaluation Matrix

Type of Objective	Evaluation Objective	Stakeholders	Data Collection Tools	Timeline	
	Question(s)			Data collection	Dissemination of Information
Capacity-Intent	**Objective 1:** Prepare six reading specialists to teach compressed and blended developmental reading courses with MyReadingLab. To what extent did faculty members engage in professional development activities that prepared them to teach compressed, blended developmental reading courses using Pearson's MyReadingLab software? To what extent did the reading department budget allow for necessary training and materials?	Administrators Faculty Members Students	Record of professional development sessions and completion documentation from Pearson and the department coordinator, budget reports	Every semester, and as-needed if new faculty are onboarded	Formative data at monthly developmental reading department meetings Summative at an annual Board of Trustees (BOT) meeting Summative at the end of the college's 5-year plan
Validation	**Objective 1:** Test and evaluate the effectiveness of the developmental reading program to support success and retention for students who require literacy skill support and instruction.	Administrators Faculty Students	Reports from the Office of Institutional Effectiveness	Every semester	Formative data at monthly developmental

	To what extent did the program and curriculum help students successfully pass developmental reading and retain enrollment at the college?				reading department meetings Summative at an annual Board of Trustees (BOT) meeting Summative at the end of the college's 5-year plan
Activity Fidelity	**Objective 1:** Design and deploy a department course schedule with 8-week blended sections. **Objective 2:** Copy coordinator Blackboard shells and MyReadingLab courses to all reading instructors to teach specified reading skill modules. To what extent did the course schedule accommodate students who requested or who tested into developmental reading? To what extent did reading department faculty teach and assess common literacy skills within MyReadingLab?	Administrators Teachers Students	Reports from the Office of Institutional Effectiveness and Online Education, MyReadingLab Coordinator Course Reports	Every semester	Formative data at monthly developmental reading department meetings Summative at an annual Board of Trustees (BOT) meeting Summative at the end of the college's 5-year plan
Participant Satisfaction	**Objective 1:** Students will report increased levels of reading motivation after completing the blended, accelerated developmental reading course. What were the pre-post results of students' Reading Motivation Scale survey responses?	Administrators Faculty Students	Reading Motivation Scale survey results, MyReadingLab module outline and program reports, reports from the Office of Institutional Effectiveness	Every semester, and as-needed if new faculty are onboarded	Formative data at monthly developmental reading department meetings Summative at an annual Board of Trustees (BOT) meeting

					Summative at the end of the college's 5-year plan
Intermediate Outcomes	**Objective 1:** The developmental course redesign will accommodate increased student enrollment. Students will participant in frequent formative assessment of reading level and skills development. To what extent were students appropriately placed in developmental reading courses? To what extent are reading faculty members employing the coordinator course shells and recommended activities and assessments?	Administrators Faculty Students BOT	Reports from the Office of Institutional Effectiveness and Online Education, Advising Office, and MyReadingLab Coordinator Course Reports	Every semester, and as-needed if new faculty are onboarded	Formative data at monthly developmental reading department meetings Summative at an annual Board of Trustees (BOT) meeting Summative at the end of the college's 5-year plan
End Outcomes	**Objective 1:** Students who participate in the compressed and accelerated developmental reading courses experience success at the course level (at least 80% pass rate), and course level success transfers to increased retention rates.	Administrators Faculty Students BOT Community/Local Industry	Reports from the Office of Institutional Effectiveness and Online Education, MyReadingLab Coordinator Course Reports	Every semester, and as-needed if new faculty are onboarded	Formative data at an annual Board of Trustees (BOT) meeting Summative at the end of the college's 5-year plan
Sustainability	**Objective 1:** The college will continue to support developmental education redesign efforts and related training/implementation expenses. **Objective 2:** Reading faculty will continue to engage in appropriate and effective professional development that supports successful course redesign efforts.	Administrators Faculty Students BOT Community/Local Industry	Budget records from the college Chief Financial Officer, Notes from the reading department, humanities division, and BOT meetings	Annually, before the July 1 fiscal year begins	Formative and Summative at an annual Board of Trustees (BOT) meeting

	To what extent can the college and reading faculty support the developmental reading program redesign and evaluation efforts?				Summative at the end of the college's 5-year plan